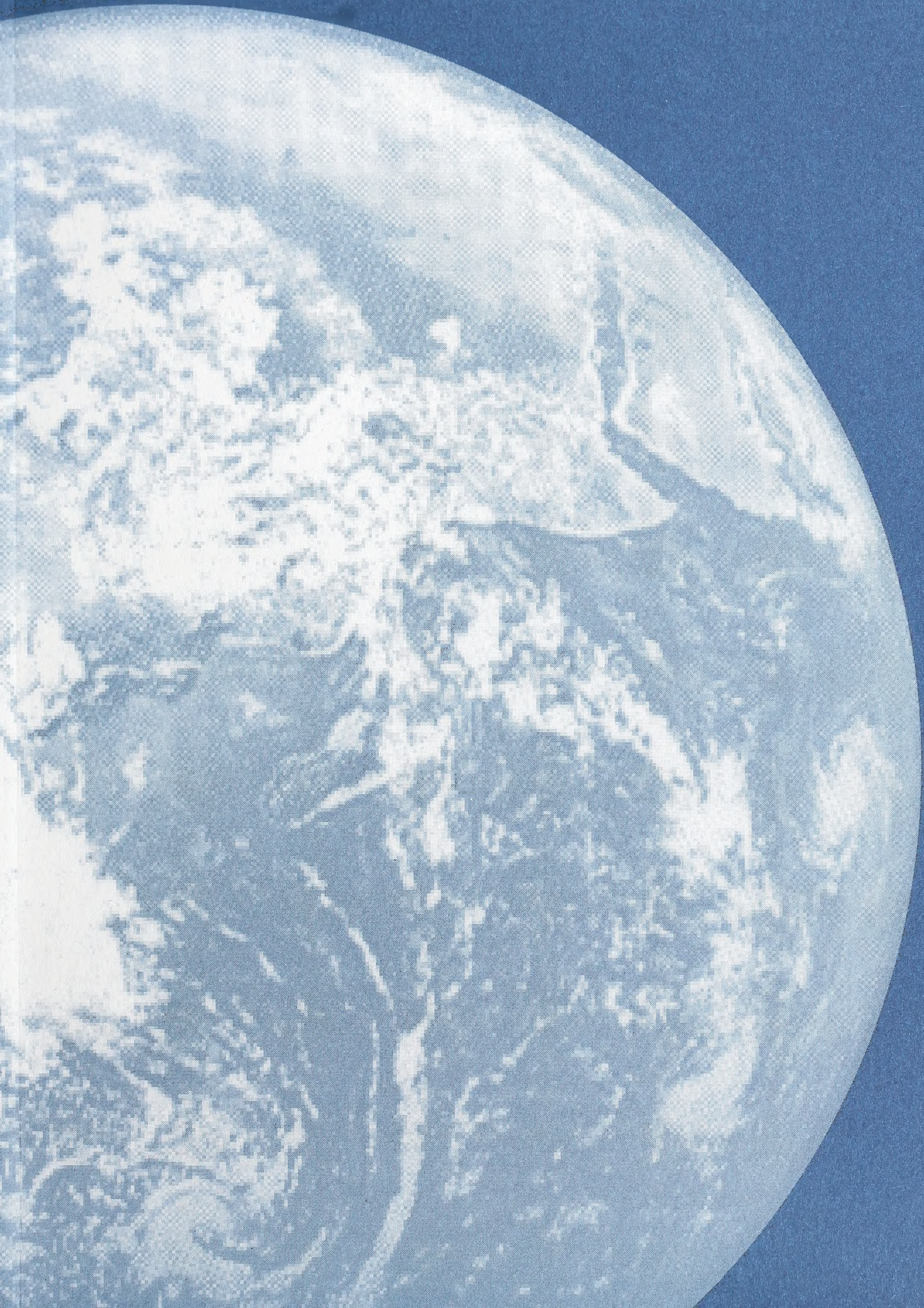
Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage



ALBERTA

Office of the Premier

In today's highly competitive global marketplace, trade, investment and a positive business climate are vital for success. Alberta has all of this and more.

The *Alberta International Export Strategy 1995/96: Marketing the Alberta Advantage* outlines the tremendous opportunities for tourism, trade, investment, industry and technology development that exist for Alberta companies in the international marketplace. This document sets directions for the province and highlights opportunities in 16 key industry sectors. A brief overview is included for each sector, along with issues and challenges, strategic directions and activity plans.

Alberta's economy has shown strong growth since 1993. Alberta is taking on the world. Our province offers businesses and workers the environment in which to grow, low taxes, now provincial sales tax and reduced regulations. That's just part of the "Alberta Advantage." Our workforce is young, well educated and committed to free enterprise; we are blessed with an abundance of natural resources and a modern, supportive infrastructure; and the province is solidly committed to research and development.

To help Albertans compete successfully in the global marketplace, we've gone to the people who have the most say in the matter, Albertans. Our export strategy is a result of extensive public consultations and partnerships with the private sector. The strategies put forth in this document were developed by sector teams representing a range of government departments, with input from the Alberta Economic Development Authority and the private sector.

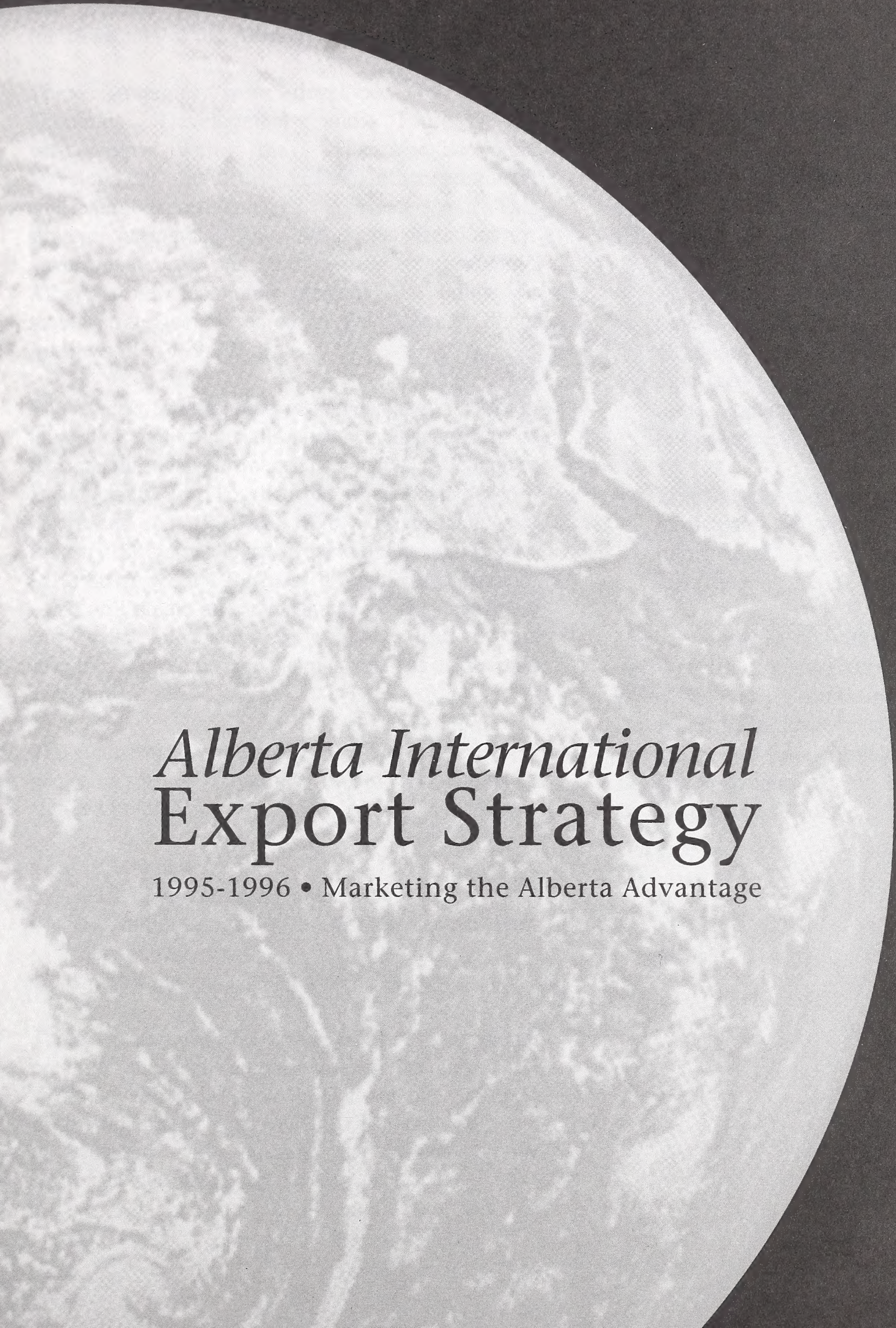
The *Alberta International Export Strategy: Marketing the Alberta Advantage* is not the end point in our journey, but rather the beginning. It reflects where we are today and where we hope to be tomorrow. Through continued and strengthened industry/government cooperation we will be able to further refine our strategies. The Alberta Government is committed to working with industry to implement the strategic directions noted in the sector strategies, and to participate in activities, as appropriate, based on support from industry.

Use the *Alberta International Export Strategy 1995/96: Marketing the Alberta Advantage* as your guide to discovering important opportunities in all industry sectors. I also invite you, through input and action, to ensure that Alberta remains a province focused on people, prosperity and preservation.

Ralph Klein
Premier

104 Legislature Building, Edmonton, Alberta, Canada T5K 2B6 Telephone 403/427-2606; Fax 403/427-0954

Strategic Overview



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1995-1996 • Marketing the Alberta Advantage

Introduction

The *Alberta International Export Strategy 1995/96 - Marketing the Alberta Advantage* sets out strategic directions for Alberta trade and tourism, industry and technology development, and investment. It also presents specific strategies and activity plans for 16 sectors of the Alberta economy.

These strategies were developed by Alberta Economic Development and Tourism, in partnership with the Alberta Economic Development Authority (AEDA), other provincial and federal departments and the private sector. This strategic partnership follows the new directions for government set out in *Seizing Opportunity*, Alberta's new economic strategy and builds on sector strategies presented in the Alberta Global Business Plan 1994/95.

The *Alberta International Export Strategy* is also an important part of the three-year business plans of participating departments. Alberta Economic Development and Tourism has three strategic core businesses for 1995 to 1998 - Investment and Industry Strategy, Trade Development and Export Sales Strategy, and Business Infrastructure Strategy - that will create an environment in which business can make informed decisions and lead in the sustained growth and expansion of Alberta's economy.

The Economic Development and Tourism business plan also sets out economic goals for Alberta to be attained by 1997:

- 110,000 new jobs
- $25.2 billion annually in exports
- $12 billion annually in private sector, non-energy investment
- $3.9 billion annually in tourism receipts.

These goals can be achieved by government creating a positive business environment and working with industry to implement the strategies in this document. The AEDA will play a lead role in working with business to implement the strategies that have been developed.

Finally, the Alberta International Export Strategy will complement the federal government's *International Trade Business Plan* for 1995/96. More information about sectors and activities of interest to you may be found in that document, available from federal offices in Edmonton and Calgary.

How to Use this Document

Information, strategies and activities are presented for 16 individual sectors. For your areas of interest, please:

- review the sector strategies, which include sector and international overviews, strategic directions and activities. Your comments and input are requested, and will help to improve these strategies and include more stakeholders in the process.
- identify activities in which you would like to participate or where you would like more information, and contact the individual identified.

Please note that activities have been included in each sector because they are felt to meet the priorities and directions outlined in the strategies. The level of support and the Alberta government's participation in these events will, however, depend on the level of interest shown by the private sector.

International Opportunities - International Challenges

Alberta's prosperity has always been strongly linked to the economies of other provinces and countries. Trade is key to Alberta's economy, accounting for over 27% of Gross Domestic Product. With a small domestic market of only 2.8 million people, Alberta must rely on increased exports to generate wealth and create jobs. International ties are also important to attract new investment and technology to Alberta.

Alberta companies are faced with many challenges in expanding their exports and investment opportunities. The world economy is restructuring at a rapid pace, with significant shifts in financial and consumer markets, transportation and technology. The global marketplace requires companies to respond to the challenges of global marketing, global sourcing and greater control by multinational companies. Increased trade in value-added goods and services, and reduced trade in commodities, will challenge Alberta's traditional industries and force Alberta companies to restructure and reorient their production and marketing processes to improve productivity.

As trade barriers continue to fall, competition for Alberta companies will increase. Governments are relying less on the use of protective tariffs and direct subsidies to industry to develop their economies. Alberta companies have to compete for investments and markets in an increasingly integrated global economy. The North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT) are providing new opportunities and new challenges for Alberta exports.

Political changes also continue to affect world markets ... and affect Alberta businesses. Political and economic changes will likely continue to cause uncertainty, creating challenges for both marketing and investment decision makers over the coming decade.

Alberta faces the challenges of global competitiveness with many advantages. Long recognized as a "trading province", Alberta's economy today reflects the inherent strengths that have driven much of our recent growth and prosperity -- abundant natural resources, an entrepreneurial spirit and an attractive business climate. In addition, the Alberta Advantage includes superior economic performance, a competitive tax climate, a skilled and productive workforce, world-class infrastructure, and an economic climate that is conducive to investment, wealth generation and job creation.

Partnership in Business Development

The sector strategies outlined in this document represent the efforts of government departments, the Alberta Economic Development Authority and the private sector to establish an integrated approach, rather than separate paths, to developing strategies and marketing activities that maximize Alberta's economic advantages.

The Alberta government recognizes that its main role is to create an environment in which the private sector can prosper -- creating jobs for Albertans, expanding investment opportunities, and promoting export sales.

Competitive markets also require that Alberta's goods and services be marketed aggressively to the global marketplace. This can be achieved more effectively through a partnership of industry and government.

Partners in Trade and Tourism

International trade is an essential link to the prosperity of the province. In 1994, the value of exports of goods and services to 191 countries reached a record high of $25.1 billion (Table 1). Over 2,000 companies in Alberta today export their

goods and services outside the province. For every $1 billion increase in exports, approximately 15,000 new jobs are created.

Table 1
Alberta Goods & Services International Exports 1993 & 1994
($ Millions)

	1993 $	% of Total	1994 $	% of Total	% Chg. 1994/93
Prim. Agr. & Related	1,898.8	8.8	2,391.7	9.5	26.0
Prim. Log. & For.	2.5	0.0	8.0	0.0	220.0
Total Mining	11,793.7	54.6	12,630.5	50.3	7.1
Oil, Gas & Sulph.	11,111.1	51.5	11,922.5	47.5	7.3
Excl. Oil, Gas & Sulphur	682.5	3.2	708.0	2.8	3.7
Manufacturing	5,791.1	26.8	7,719.2	30.8	33.3
Food, Feed & Bev.	752.9	.5	969.8	3.9	28.8
Plastics	45.8	0.2	56.7	0.2	24.0
Textiles	114.3	0.5	100.4	0.4	-12.1
Clothing	13.2	0.1	18.1	0.1	37.4
Wood Prod.	277.3	1.3	427.9	1.7	54.3
Furn. & Fixtures	63.5	0.3	93.6	0.4	47.3
Paper & Allied Prod.	442.1	2.0	853.3	3.4	93.0
Primary Metals	134.0	0.6	224.3	0.9	67.4
Fabricated Metal Prod.	79.0	0.4	104.3	0.4	32.0
Machinery	387.2	1.8	344.3	1.4	-11.1
Trans. Equipment	95.1	0.4	123.1	0.5	29.5
Elect. & Elect. Equip.	372.4	1.7	615.7	2.5	65.3
Non-Metallic Mineral Prod.	38.7	0.2	44.1	0.2	14.0
Ref. Petroleum & Coal Prod.	1,194.6	5.5	1,538.8	6.1	28.8
Chem. & Chem. Products	1,606.4	7.4	2,022.8	8.1	25.9
Other Manufact.	174.6	0.8	181.9	0.7	4.2
Other Exports	205.1	1.0	258.9	1.0	26.3
TOTAL GOODS	19,688.4	91.2	23,008.2	91.7	16.9
Tourism	771.2	3.6	*841.1	3.4	9.1
*Other Serv.	1,124.2	5.2	1,236.6	4.9	10.0
TOTAL SERV.	1,895.4	8.8	2,077.7	8.3	9.6
TOTAL EXP.	21,584.0	100.0	25,085.9	100.0	16.2

* Estimates
R Revised
Source: Statistics Canada

Alberta's exports have long been dominated by primary resources. The mining industry, including oil and gas, made up 50.3% of merchandise exports in 1994, while primary agriculture exports accounted for 9.5%.

Manufacturing exports vital to the province's growth and diversification made up 30.8% of Alberta's total goods exports in 1994. Among manufacturing industries, there were significant levels of exports in food processing, wood and paper products, electrical and electronic equipment, refined petroleum and coal products, and chemicals and chemical products.

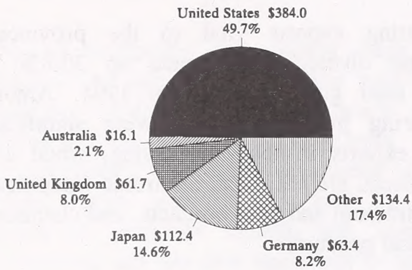
The United States has consistently been Alberta's largest foreign market, accounting in 1994 for 80.3% of the value of international exports of goods. As a region, Asia Pacific was the destination for another 12.9% of goods exports in the same year, with Japan representing Alberta's second largest export market overall (6.1% of total).

Exports of services are also increasing in importance in international trade, not only because of their growing value, but also because they represent the new "engine of growth" for the economy. Alberta's services exports, which accounted for $2.1 billion of total 1994 exports of more than $25.1 billion, include tourism, business services such as engineering, consulting and financial services, and transportation. Unfortunately, services exports are difficult to measure by industry or country, since data for services other than tourism are not available.

Alberta Economic Development and Tourism, in conjunction with Alberta Treasury-Statistics, is conducting a survey of industry sectors to measure the volume and value of services exports from the province. The objective of the survey is to track the performance of Alberta's services exports.

The tourism industry closely reflects the global economy. One of the province's largest industries, tourism employs about 100,000 Albertans. Building on the province's natural resource base, scenic beauty and cultural diversity, it also continues to be one of the most important growth areas of the economy.

Figure 1
International Tourism Expenditures in Alberta by Origin
1993 (millions)



Total International Expenditures: $772 Million
Source: Statistics Canada

In 1993, tourism generated over $3.12 billion in revenue in Alberta, of which $1.45 billion was from out-of-province visitors. Of this, $772 million or 25% came from international visitors (see Figure 1). Key international markets included the U.S. (49.7%), Japan (14.6%), Germany (8.2%), the United Kingdom (8.0%), and Australia (2.1%). Visitors from the rest of Canada generated $682 million or 22% of revenues. Slightly over half of all tourism revenues ($1.7 billion or 53%) were generated by Albertans.

Alberta Strategies for Trade and Tourism

Alberta's goal is to increase exports to $25.2 billion by the year 1997, an increase of 33% from 1992/93. Alberta also aims to increase the number of exporters from 2,000 to 3,000 over the three years. For tourism, the goal is to achieve $3.9 billion annually in tourism receipts by 1997.

To achieve these targets, government will focus on the following strategies to help industry compete in the international marketplace:

- Increase awareness within Alberta of the importance of exports
- Market Alberta's image outside the province
- Provide support for first-time exporters
- Improve market information collection and dissemination
- Develop strategic plans with industry
- Provide focused assistance for Alberta companies in international markets
- Expand reverse marketplace activities
- Facilitate development of strategic alliances
- Improve intergovernmental cooperation.

The sector strategies and action plans outlined in this *Alberta International Export Strategy* provide the mechanism to achieve these goals and to implement overall strategies.

The Alberta government recently released its latest draft export marketing strategy entitled *Targeting Asia Pacific: Towards A Strategy For Growth*. This framework for a strategy, which will be developed through business consultation in 1995, complements the sector strategies in this document. Also in 1995, a strategy for the Americas will be developed in consultation with business.

Further information on trade and tourism strategies, programs and activities, for sectors or for geographic regions, may be obtained by contacting Tourism, Trade and Investment Division Services at (403) 422-6236 or fax (403) 422-9127 or Alberta Agriculture, Food and Rural Development at (403) 427-4241 or fax (403) 422-9746.

Partners in Industry and Technology Development

Sustaining competitive, global industries is key to Alberta's growth and prosperity. Alberta has been fortunate in developing a strong industrial base, linked primarily to the resource industries of agriculture, energy and forestry. To provide jobs and wealth for the future, Alberta must build on these inherent strengths and increase production of value-added goods and services.

Today, technology development is the driving force behind productivity improvements and competitiveness. Finding and applying new technologies to expand production or improve product quality requires investment in technology, equipment and people. Investment in research and development is also vital to remaining competitive. With an average investment of over $250 million per year, the Alberta government is one of the

largest financial contributors in Canada to science and technology activity. From 1983 to 1993, $2.6 billion has been invested in promoting science and technology; a number of centres of advanced technology have been developed; and over 1,000 high technology companies are now active in Alberta, employing more than 50,000 people.

Alberta recently established the Alberta Science and Research Authority, which will work with industry and government to identify the strategic priorities and opportunities in science and research and coordinate research and development programs funded by the province.

Alberta Strategies for Industry and Technology Development

Diversification, growth and competitiveness are key to the development of industry and technology in Alberta. The Department works in partnership with industry and other investors inside and outside of Alberta on a wide range of industrial development initiatives to:

- Accelerate the rate of investment in Alberta.
- Broaden further the manufacturing base in Alberta.
- Expand and develop existing industry sectors.
- Encourage establishment of new industry sectors.

Major activities supporting these aims include:

- Targeting promotional efforts to actively attract new manufacturing and processing companies to Alberta.
- Assisting industrial firms inside and outside Alberta interested in investment opportunities to address their needs in development decisions.
- Identifying and evaluating development opportunities and markets.
- Providing timely market intelligence, information and advice.
- Carrying out competitiveness and productivity improvement initiatives.
- Offering procurement assistance and technology awareness services.
- Providing assistance with various planning and regulatory processes to allow expansion and increased competitiveness of existing companies and establishment of new operations.
- Helping Alberta companies develop supplier capability and increase buyer awareness of this capability.

Technology development in Alberta is a responsibility shared by the private sector, academic institutions, and government departments and agencies such as Alberta Economic Development and Tourism, the Alberta Research Council, the Alberta Economic Development Authority and the Alberta Science and Research Authority.

The economic growth/diversification potential associated with advanced technologies will be exploited by:

- Supporting the creation and expansion of technology-intensive industries and industrial clusters in the fields of advanced materials, biotechnology, telecommunications, electronics, environmental technologies, information technologies, and medical devices.
- Encouraging the application of advanced technologies in traditional resource industries, manufacturing, and the services sector.
- Ensuring that an effective scientific infrastructure is available to support the industries and industrial clusters.

Further information on the industry and technology development strategies, programs and services, may be obtained by contacting:

- Industry, Technology and Forestry Development Division of Alberta Economic Development and Tourism at (403) 427-2005
- Alberta Research Council at (403) 450-5111
- Alberta Science and Research Authority at (403) 427-1488

Partners in Maximizing Investment

Maximizing investment across all industry sectors is critical to support the province's economic growth through trade. Investment capital is essential for establishing new industries, expanding existing ones, and building essential infrastructure.

In 1994, total public and private investment in Alberta exceeded $23.7 billion, including capital expenditures and repairs, an increase of about 10% from the previous year. This represented a 30% increase in investment in the oil and gas industry, but a 10% decline in the manufacturing sector.

Business immigration is another important source of skills and investment. Business immigration has increased, with Alberta receiving the fourth highest number of business immigrants in Canada in 1993: 6.7% overall. This includes 555 principal applicants in the entrepreneur, investor and self-employed categories, plus their dependents, for a total of approximately 2,100.

The average total money transferred upon arrival by business immigrants is $812,000 for entrepreneurs and $2,000,000 for investors, indicating potential for additional business and consumer-related spending. Each immigrant entrepreneur invests an average of $100,000 and creates three to five jobs.

Continued strong investment is key to Alberta's growth; however, competition to secure investment is world-wide. The globalization of the world's economy, the trans-national nature of many of the world's corporations, and the ease with which capital can flow around the world, places Alberta in competition with jurisdictions throughout the world in attempting to attract capital and business activity. The demand for investment dollars is affected by more than national or international competitors. Even within Alberta there is strong competition between jurisdictions for business investment for the benefit of the local community.

Competition in attracting investment is further heightened by the incentives offered by economic development agencies to potential investors. Incentives can range from direct financial assistance, including loans, loan guarantees, and grants, to variations in the level of basic taxes and tax exemptions, deductions, credits and special treatments.

Alberta has recently moved away from direct financial incentives to business with a strategy to now focus on the province's economic fundamentals and the overall climate for business.

Alberta Strategies for Maximizing Investment

A goal to increase annual private business investment (excluding energy) by 20% to $12 billion by 1997 has been set by the Alberta government.

The role for government in investment is to build on the trends of the new global economy, the province's traditional strengths, and new and emerging investment opportunities in local communities.

To achieve the investment goal, the following three objectives have been established:

1. *To build a superior business climate which serves to attract new business investment and contributes to the retention and expansion of existing operations.* This includes:

   - A stable, growth-oriented society.
   - A deficit - and - debt - free provincial government.
   - Excellent infrastructure.

- Highly skilled and available human resources.

- A favourable and streamlined regulatory regime.

- The lowest rates of taxation.

- A private sector focus.

- An entrepreneurial attitude and an international outlook.

- Community-based initiatives.

- Timely, concise and comprehensive measures of investment activity.

2. *To increase the awareness of investment opportunities in Alberta among key potential investors.* This includes:

    - An increase in the level of Albertans' knowledge of the advantages and opportunities of investing in Alberta.

    - An increase in the level of awareness in the global investment community of Alberta, Alberta investment opportunities and the advantages of investing in Alberta.

3. *To establish strong links between potential investors and investment opportunities.* In Alberta this includes:

- Readily accessible information for investors on investment opportunities.

- Matching mechanisms between investors and specific investment opportunities.

- Improved accessibility to capital.

- Services to work with specific investment opportunities on a customized basis to help in addressing their capital needs.

- Frameworks to nurture cooperative and complementary investment activities.

In pursuing these objectives the Alberta government is guided by the following strategic directions:

- High visibility and personal relationships with decision makers in the national and international financial and business community and the governments of other appropriate jurisdictions led by the Premier, Ministers and senior government officials.

- An in-depth knowledge and understanding of Alberta's advantages with focused actions and responses to clients derived from accurate and timely market intelligence.

- An in-depth knowledge and understanding of local and out-of province investors' needs and sensitivities combined with a service orientation.

- An in-depth knowledge and understanding of Alberta's competitors and their attributes.

- A communications and strategic marketing plan with support material that capitalizes on and stresses the advantages of investing in Alberta.

- Partnership and cooperation with Alberta's industry, business communities and other levels of government.

Investment Activities

Alberta Economic Development and Tourism undertakes a number of ongoing activities which cut across all industry sectors and are aimed at achieving the objectives to maximize investment in the province. These activities include:

- Marketing opportunities in Alberta for direct equity investment, licensing, technology transfers, mergers or acquisitions, joint ventures or other forms of strategic alliances through the Investment Matching Service of Alberta (IMSA) which serves a global and sophisticated investment network.

- Facilitating strategic alliances between Alberta companies and national and international companies to promote the transfer of technology, product development, and acquisition of management expertise by publishing and distributing "Strategic Alliances In Alberta".

- Managing the provincial responsibilities under the Business Immigration Program which markets Alberta as an attractive place for individuals from around the world to do business and/or settle, and thereby attracting substantial investment capital to Alberta. Investigating various models (i.e. blind stock pools, association-sponsored venture capital corporations, export financing, earned scientific tax credits etc.) to improve access to investment capital.

- Promoting the formation and operation of diverse and competitive capital markets in Alberta.

- Participating in the joint federal/western provinces study on financing for small and medium sized businesses in Western Canada.

- Working with specific investment opportunities on a customized basis to help address their capital needs.

- Leading outgoing and incoming investment missions.

- Working with proponents and investors inside and outside of Alberta on a wide range of industrial development projects aimed at accelerating the rate of investment in Alberta.

Further information about investment activities can be obtained by contacting:

- Tourism, Trade and Investment Division - (403) 422-6236
- Business Finance Division - (403) 427-3300
- Industry Technology and Forestry Development Division - (403) 427-2005
- Small Business and Tourism Development Division - (403) 427-3685
- Alberta Agriculture, Food and Rural Development - (403) 427-4241

Sector Strategies and Activity Calendars

The remainder of this document presents detailed sector strategies for 16 sectors of importance to the Alberta economy. Each strategy identifies strategic directions and actions that will help to develop products and services for the global market.

A one page summary table for each sector is presented in the Appendix to this document.

Activity lists for 1995/96 for each sector identify various marketing events proposed for the coming year. Businesses are encouraged to contact the individuals listed for further information about participating in these events. The Alberta government will only participate in events or activities where there is support from the industry and private sector partners, and not necessarily in all activities listed.

Many other events -- trade shows, conferences, missions -- are offered in international markets. To obtain information on other related events, contact Tourism, Trade & Investment Division Services at (403) 422-6236 or fax (403) 422-9127.

Aerospace Equipment and Services

Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Aerospace Equipment and Services

* ***There are presently 60 companies engaged in niche aerospace markets.***

* ***The industry had sales of $170 million in 1993.***

* ***The industry currently employs approximately 2,000 people.***

* ***A strong base of world-competitive companies and dynamic, forward-looking management and employee teams positions the Alberta aerospace industry to increase its role in the global aerospace market.***

Definition

Aerospace equipment and service firms design, manufacture and service a full range of products for the general aviation and space communities. The products range from complete aircraft and spacecraft to all component parts of both these vehicles and ground-support equipment. Ongoing maintenance, repair and operational support services associated with air, space and ground equipment are provided as well.

The aircraft manufacturing and service industry has a three-tier structure.

Tier 1 - Aircraft manufacturers with a full systems integration capability.

Tier 2 - Companies that produce integrated systems, including propulsion systems, landing gear and major structural components sections for Tier 1 companies. Alberta companies are represented in this tier.

Tier 3 - Companies that manufacture aircraft components for Tier 1 and 2 companies or for in-service maintenance, repair and modification companies. Alberta companies are represented in this tier.

International Overview

The aerospace industry is global in nature. The leading nations are the U.S. with 58% of the world market, the U.K., France, Germany, and Italy with a combined share of 34%, Canada with 4% and Japan with slightly less than 4%. After four years of fare wars and record losses, world airlines expect to return to profit this year as passenger and cargo traffic continues to pickup. PWA Corporation has already announced that it recorded an $85.4 million profit in the third quarter of 1994, the best quarterly profit in the airline's history.

Airlines have sought to improve their financial performance by extensive cost cutting to improve overall productivity. A result of these efforts has been a growth in employee ownership of airlines where shares have been exchanged for labour concessions.

During the recession, continuous rationalization of both the civil and the defence sides of the business has taken place. Defence contractors have had to adapt to what appears to be a lasting reduction in military budgets.

Because airlines are preoccupied with holding down costs, manufacturers have had to shift their emphasis from product research and development to manufacturing price improvements. Emphasis is on producing airliners most cost efficiently. This would ensure a return on investment by airline customers purchasing aircraft with lower operating and acquisition costs.

The three leading aircraft manufacturers, Boeing, Airbus, and McDonnell Douglas, forecast strong demand for new aircraft over the next 20 years. Boeing, the world's biggest manufacturer, expects $980 billion worth of new airliners to be sold in this period to meet the growth in air travel and the need to replace older jets.

To offset the costs of developing new products and technologies and the increasingly long investment

lead times, manufacturers are seeking collaboration, partnerships and joint ventures around the world, reflecting the global nature of the aerospace industry. Growth in air transport drives economic progress. The International Air Transport Action Group representing airlines, aircraft manufacturers, and other organizations involved in air transport, estimates that every one million passengers passing through an airport generate between 2,500 and 8,000 jobs (including support services), depending upon the size of the airport.

In the short to medium term, the growth of the Asia Pacific market is expected to outperform other markets. In particular, the Chinese aviation market (civil and military) has been growing at a very fast rate. In contrast, the market in the Former Soviet Union has failed to materialize.

Canadian Overview

Canada is a strong player in the global aerospace industry. With sales approaching $8.4-billion, the Canadian industry is the sixth largest in the world. Ontario and Quebec, with about equal magnitude, account for approximately 90% of Canadian sales. Alberta accounts for approximately 2% of the Canadian aerospace industry, or approximately $170 million in sales.

Traditionally, the Canadian aerospace industry devotes about 70% of production to civilian markets, including regional airlines, business aircraft users, as well as transport and general aviation manufacturers. Canada (Pratt & Whitney) is a world leader in small aircraft gas turbine engines and has a significant market share in the 30 to 50 passenger turboprop aircraft market. Canada is also gaining market share in the large corporate jet aircraft market sector.

The Canadian industry traditionally invests approximately 10% of revenue from total sales in research and development, which is less than the U.S., France or the United Kingdom.

The federal government has committed to reviewing the potential for the commercialization of a number of its related aerospace activities, one of which is the Canadian civil air navigation system. The commercialization will create new opportunities for Alberta aerospace firms. Capturing these opportunities, particularly within Alberta and Western Canada, will require the full support and active involvement of both the Alberta government and Alberta companies. Successful commercialization and management of these facilities may prove to be internationally marketable for Alberta.

Alberta Position

Aerospace plays an important part in Alberta's industrial diversification. The industry consists of about 60 Alberta companies who target niche markets.

Despite the severe downturn in world aviation and aerospace as a result of the worldwide recession and ending of the cold war, the Alberta industry continues to employ over 2,000 people, compared to approximately 59,000 employees in the Canadian aerospace industry as a whole. With the pending upswing in the aviation and aerospace industries, Alberta is poised to see an increase in aerospace employment.

Subsectors

1. Repair and Overhaul

   This is the stronger subsector of the provincial aerospace industry with a particular expertise in the maintenance, repair and modification of a full range of fixed and rotary wing aircraft.

   Alberta's two leading companies, CAE Aviation Ltd. and Field Aviation Company Inc., have established worldwide recognition in the maintenance, repair and modification of a variety of aircraft, including the Lockheed Hercules, the complete de Havilland and Canadair product lines, and the Boeing 707, 720, 727, 737 aircraft. Both companies are committed to using local suppliers of goods and services to support their maintenance programs.

   In addition, Canadian Airlines International has established its narrow body aircraft repair and overhaul facilities in Calgary, where its fleet of Boeing 737 and Airbus 320 aircraft are maintained.

2. Aircraft Parts

   This subsector produces a full range of parts required in the aerospace industry, including: aircraft seats, plastic parts, wire harness, and plumbing components.

3. Engines and Engine Parts

   Canada's only turbo engine manufacturer, Pratt & Whitney, operates a modern, state-of-the-art turbo engine assembly plant in Lethbridge.

4. Aerospace-Defence Avionics

   Firms in this subsector provide airborne or ground-based navigation, safety and communications systems and equipment. Pelorus Navigation Systems has developed a local area differential GPS ground station that provides precision approaches to runways, along with a successful line of distance-measuring equipment. Western Avionics has developed data acquisition equipment. The Communications Division of Computing Devices Canada Ltd. has special expertise in defence communications systems. The Services and Support Division of Hughes Aircraft of Canada Ltd. provides test, report, and engineering support for aircraft radar systems.

5. Aerospace Aviation Services and Training

   Air and ground crew training facilities in the province are second to none and, indeed, serve the world market. A variety of flight training schools and colleges, two institutes of technology and four universities are excellent resources. Of particular note is the aircraft engineering, maintenance and avionics training provided at the Southern and Northern Alberta Institutes of Technology.

   Another component of the subsector is the publication of technical manuals. CAE Aviation Ltd. is the Canadian leader in this area.

   A full complement of engineering and architectural services are provided by companies such as FSC Groves Hodgson Manasc Architects Ltd., Riddell Group Architects & Engineering Ltd., and A.D. Williams Engineering Ltd.

6. Space

   The recent announcement by the Canadian Space Agency of a new Long Term Space Plan (LTSP II) has created a series of opportunities for Alberta's young but rapidly growing space sector. The $2.7-billion LTSP II maps out the federal government's strategy for space over the next 10 years. Alberta companies such as Intera Technologies, Itres Research and Hughes Aircraft Canada have the expertise and proven track records to participate in several program areas, and are aggressively seeking contracts in their respective fields.

7. Research and Development

   Research and development is taking place in advanced materials (such as magnesium injection moulding technology) and coatings for corrosion parts (such as those in exhaust system areas). Alberta universities continue research into systems and components.

Situation Analysis

- Alberta has a well trained workforce and supporting infrastructure, enabling firms to meet stringent quality standards. The demand for skilled labour is expected to rise with the utilization of new and specialized technologies.

- Alberta companies have developed specific expertise in areas such as composite materials, powder coating, communications, geomatics, integration of system design and turbo engine assembly.

- The smaller companies are flexible and respond quickly to market needs.

- Alberta companies need to continually access new technologies to remain competitive.

- The critical mass of Alberta businesses is growing; however, there is a lack of large component suppliers who have adequate financial resources to

assume more risk. Small companies often lack the necessary capital to grow and to aggressively market their products and services.

- Alberta companies repair small to medium-size aircraft engines, and should look for opportunities to expand their capability in engine repair and overhaul to larger engines.

- Alberta companies are sometimes at a disadvantage because of delays in processing work orders through Customs.

- The aerospace equipment and services industry is becoming more and more automated, resulting in a move to intelligent manufacturing systems for trouble shooting and quality control.

- There is a need to maintain competitiveness by utilizing new advanced materials and processes.

- There is a need to train aging pilots for administrative/management jobs within the aerospace/aviation industry, as well as to train the pilots who will replace them.

Strategic Direction and Priorities

Priority Markets

The United States is the principal export market for Alberta due to the industry's proximity to this large market, the favourable trade arrangements between Canada and the United States for aerospace and defence products, and the ownership linkages that exist between major U.S. aerospace firms and their Canadian counterparts. South America, Australia and Asia (especially China) are important export markets showing considerable potential and opportunity for growth.

In China, infrastructure problems still hinder business travel and airline services remain an obstacle. However, a new terminal is scheduled to open in Beijing airport by 1996. The country has over 25 regional airlines, the largest of which is Air China. Through a joint venture established with the German carrier Lufthansa, Air China undertakes aircraft maintenance and servicing and has made considerable effort to upgrade to international standards.

Objectives

- Increase the number of Alberta companies working in aerospace and supporting advanced manufacturing technology sectors.

- Increase the volume of aerospace equipment and services being exported.

- Retain and expand jobs; support indigenous companies.

- Support development of world-scale capability and advanced manufacturing technologies.

- Increase numbers of alliances between Alberta and Canadian companies for R&D and manufacturing purposes.

Strategic Direction

- Continue to encourage and assist Alberta companies to set up alliances with first-level subcontractors.

- Assist Alberta companies to identify opportunities and to enhance development of leads (strategic partners, investment, technology, distribution).

- In consultation with industry associations, identify current and future training needs for new technologies, such as CAD engineering, precision plastics, and precision machining and tooling.

- Assist companies in forming flexible networks and strategic alliances with other companies in Canada and outside.

- Assist companies in assessing their competitive capabilities within the industry. This will assist companies in determining the strengths and weaknesses of various partners in forming business networks.

- Ensure government and industry work together to support manpower, training, and infrastructure.

- Assist industry to access investment financing and strategic partners.

- Ensure industry and government work together to encourage the establishment and maintenance of a favourable tax and corporate business environment (a) within Alberta, and (b) with a view to influencing Canada's domestic environment.

- Assist companies to obtain a share of federal projects and United States government procurement.

- Lobby federal government to (a) continue major sector projects, and (b) continue support of the aerospace industry.

- Continue to support centres of excellence (post-secondary education, such as the University of Calgary's leading role in geomatics research, and other institutes of excellence such as The Laser Institute, Alberta Research Council, Alberta Microelectronic Centre, Electronics Test Centre).

- Encourage participation in trade shows and airshows as a means for Alberta companies to access potential clients and to develop cross promotions with the tourism sector.

- Assist industry to develop innovative marketing activities, such as reverse marketplaces, trading houses and cross promotions with tourism through pre- and post-meeting tours and through business travel associations to bring aerospace conventions to Alberta.

- Assist Alberta companies to obtain a share of business resulting from the commercialization of the Canadian civil air navigation system. Market this experience and expertise in commercialization to foreign countries.

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Aerospace Equipment & Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Fleet Industrial Supply Centre Mission	Introduce Alberta defence-related companies to opportunities for supplying Puget Sound Naval bases	Apr-95		Bremerton, WA	Sam Chow, Economic Development & Tourism (ED&T) - 427-4323
Canadian Advanced Technology Assoc. Conference (CATA)	Incoming Ministerial Mission from Taiwan	May-95	May-95	Calgary, AB	Jay Tam, ED&T - 427-4809
TABES (Mission)	Alberta companies meet with U.S. prime contractors in defence	15-May-95	17-May-95	Huntsville, AL	John Jacobson, ED&T - 427-1905
Technomart - High Technology Exhibition TAJEON	Mission to South Korea	19-May-95	May	South Korea	Gerry Royer, ED&T - 427-4809
SUBCON	Canadian companies in aerospace/defence display products	Jun-95	Jun-95	TBA	John Jacobson, ED&T - 427-1905
Mission: Canadian consulate to Rome Labs at Griffiss AFB	Rome Labs is the Air Force Systems command centre for command, control, communications and intelligence research and development	Jun-95	Jun-95	Utica (Buffalo), NY	John Jacobson, ED&T - 427-1905
Taipei Aerospace Technology Exhibition 95 (TATE 95)	Canada Info Booth to display company information; catalogue	Jul-95	Jul-95	Taipei	Jay Tam, ED&T - 427-4809
Military Conversion Partnering	Focus on defence conversion as it relates to tactical telecom; commercial communication, GIS and GPS. How to win contracts in the U.S.	Oct-95	Oct-95	Atlanta, GA	John Jacobson, ED&T - 427-1905
Aerospace Workshop	Export training; wanting aerospace companies interested to sell into the U.S.	Nov-95		Alberta	Sam Chow, ED&T - 427-4323
Peacekeeping '95	Companies wanting to sell to UN, member countries and international humanitarian aid organizations	13-Nov-95	15-Nov-95	Washington, DC	John Jacobson, ED&T - 427-1905
Asian Aerospace	Second largest international air show targeting S.E. Asian market	Feb-96	Feb-96	Singapore	Norm Morrison, ED&T - 422-6236

Agricultural and Industrial Equipment, Technology and Services

Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Agricultural and Industrial Equipment, Technology and Services

* ***Alberta's agricultural equipment industry employs about 2,000 people in 230 companies. Sales of agricultural equipment are about $400 million annually, with 50% being exports. Many agricultural equipment manufacturers are located in smaller rural communities and are often the major employer.***

* ***Western Canadian provinces and the Northern U.S. states are the primary markets. More southerly states, such as Kansas and Texas are of increasing importance and long-term potential exists in offshore markets such as Mexico, Australia, and Ukraine.***

* ***Alberta's industrial equipment industry has sales exceeding $500 million annually and employs over 4,700 people in 170 companies.***

* ***Primary markets for industrial equipment are Canada and the U.S. Specialized parts and equipment have been the key to export markets.***

* ***Increasing trade with the Former Soviet Union will open new markets for industrial and construction equipment manufactured in Alberta. The trend is to design this type of machinery with more efficient power units and faster work cycles.***

Definition

This sector includes two subsectors: *agricultural equipment* and *industrial equipment*.

The agricultural equipment subsector encompasses all types of farm equipment including tractors, combines, cultivators, chisel plows, seeders, swathers and sprayers. It also includes specialized equipment related to livestock, irrigation, dairy, equine, beekeeping, lawn and garden, and various other emerging agriculture-related sectors.

The industrial equipment subsector includes equipment for mining (underground, open pit, tar sands), civil engineering construction and maintenance (roads, airports, dams), conveying and material handling equipment, and specialized equipment used in various manufacturing industries.

Both subsectors also include related technology and services.

International Overview and Priority Markets

For the agricultural equipment subsector, the *Western Canadian provinces*, particularly Saskatchewan, are the primary markets. For small Alberta manufacturers new to the export market, Saskatchewan and Manitoba account for a significant proportion of total sales.

Internationally, the *United States* is the major market with the majority of exports going to the Northern U.S. states. More southerly states, such as Kansas and Texas, are of increasing importance and California is emerging as a market for select technology from Alberta firms. In addition, the market for agricultural equipment in the United States is expected to increase by approximately 50% within the next five years, as the industry enters a 10-year replacement cycle. Other international markets that show long-term potential include *Ukraine, Mexico, Australia* and the *Middle East*.

For the industrial equipment subsector, the primary markets are *Canada* and the *United States*. Increasing trade with the *Former Soviet Union* will open new markets for industrial and construction equipment manufactured in Alberta.

Alberta Position

Alberta's agricultural equipment subsector is very diverse and is composed of *short-line* firms that produce a variety of implements and attachments. There are no full-line firms (manufacturers of tractors and combines) in Alberta, but there are hundreds of full-line dealers that act as distributors for Alberta producers. Several companies in the sector produce component parts used for a variety of manufactured products or manufacture agricultural equipment as only one of several lines of manufactured products. Alberta's agricultural equipment sector has a low profile and is not well recognized as a major industry sector. However, the industry is important since many agricultural equipment manufacturers are located in smaller rural communities and are often the major employer. In addition, the salaries and wages paid to rural Alberta employees of agricultural equipment manufacturers tend to be higher than for other businesses.

Alberta's short-line firms can focus on the production of less sophisticated equipment and adapt more quickly than full-line firms to changing market conditions. They are in an ideal position to meet the increasing demand for smaller specialized equipment from the emerging hobby-farm market in North America. Currently, the exchange rate differential between the Canadian and U.S. dollar is a benefit to Alberta companies exporting agricultural equipment to the United States. The trend toward global marketing offers an opportunity for expansion to Alberta manufacturers of short-line farm machinery. Their dryland farming technology is at the leading edge and is in demand in all major countries growing cereal grains under large scale dryland farming conditions. Alberta has the potential to be the world-recognized source for this type of machinery and technology in the next decade.

Successful firms in Alberta's industrial equipment subsector are those that have been able to withstand the cyclical and often highly erratic nature of demand for construction and mining machinery, as well as provide reliable and low-maintenance machines. Specialization has been the key to export markets, with Alberta firms exporting specialized parts and equipment to markets primarily in the U.S. The trend is to design industrial and construction machinery with more efficient power units and faster work cycles. Fewer machines will be required for the same amount of work. Machines will also be equipped with more attachments for different types of jobs on site and this will further reduce the required number of machines.

Objectives

The overall, long-term objective is to increase exports and create jobs in Alberta. The specific sector objectives are outlined in Table 1. The measurement criteria are to assess whether the stated objective is achieved and, not necessarily to assess how it was achieved. The *Lead Agency* in Alberta Economic Development & Tourism is identified in the attached plan and indicated as:

TTI: Tourism, Trade & Investment Division
IDB: Industry Development Branch
BSB: Business Services Branch
ARC: Alberta Research Council

The *Lead Agency* is deemed responsible for seeing that activities generally identified in the plan are in fact carried out. The lead agency will work in cooperation with other departments of government and with the private sector, primarily represented by PIMA (Prairie Implement Manufacturers Association).

Follow-up and Monitoring

The sector sub-committee, in cooperation with sector and industry representatives, will monitor and report on plan progress.

Objective #1

Achieve greater export results through expanded opportunities in new and existing markets for agricultural and industrial equipment companies.

Measurement Criteria

- Volume/value of exports
- Number of jobs created/maintained
- Number of shows and participants
- Number of Alberta sales generated from shows/missions
- Number of strategic alliances, business networks and investments initiated

Strategies	Activities	Lead Agency/Coordinator
Provide better promotion and information resources	Directory of Agricultural equipment	IDB - Darryl Martin
	Market Intelligence seminars for sectors	TTI - Don Chinski
	Establish baseline data for the sectors	IDB - Darryl Martin
Maintain existing markets and improve awareness of positive and negative long-term market trends	Attend established trade shows	TTI - Don Chinski
	Enhance current market intelligence	TTI - Don Chinski
	Encourage full line dealers to source from Alberta firms and encourage international distributors, wholesalers and agents to source Alberta manufacturers	IDB - Brad Trefan
Improve companies awareness and identify new market opportuntiies	Encourage full line dealers to source from Alberta firms and encourage international distributors, wholesalers and agents to source Alberta manufacturers	IDB - Brad Trefan
	Attend new shows and promote new markets	TTI - Don Chinski
	Publish good news stories	BSB - Al Walkey
Promote strategic alliances of Alberta firms in global markets	Investigate formal networks and their value to the sectors	ARC - Robert Faulder
	Facilitate increased business networking within the sectors	IDB - Denny Ross-Smith
	Review investment requirements for the sectors	TTI - Frank McMillan

Objective #2

Increase the competitiveness of the agricultural and industrial equipment sector in the global marketplace

Measurement criteria

- Evaluate number of participants at seminars/workshops
- Evaluate performance 3-6 months after sessions
- Evaluate volume/value of exports against cost of production
- Number of companies engaged in Total Quality Management
- Number of companies with ISO 9000 Certification

Strategies	Activities	Lead Agency/Co-ordinator
Increase the marketing abilities of companies; Increase management abilities of companies	Coordinate/facilitate seminars/workshops	BSB/IDB/AGR Holly Palmer
	Enhance delivery of programs through interdepartmental activities	BSB/IDB/AGR Darryl Martin
Increase production and engineering capabilities of companies	Enhance intelligence of long-term marketing trends	TTI Don Chinski
	Increase training opportunities to enhance worker skills	IDB Darryl Martin
Increase the knowledge and use of technology by companies	Continue Joint Product Development and Joint Research Ventures	ARC Robert Faulder
	Support increased participation in manufacturing technology fairs	IDB Darryl Martin

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Agricultural & Industrial Equipment, Technology & Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Directory of Agricultural Equipment	Develop and publish a current directory for the sector	Apr-95	Mar-96	Alberta	Darryl Martin, Economic Development & Tourism (ED&T) - 427-2005
Market intelligence seminars for agricultural and industrial equipment sector	Develop and run seminars to disseminate market intelligence gathered during missions	Apr-95	Mar-96	Alberta	Don Chinski, ED&T - 427-4809
Western Canada Farm Progress Show	Trade Show	21-Jun-95	24-Jun-95	Regina, SK	Sam Chow, ED&T - 427-6089
Red Deer Farm Show - Incoming mission from U.S.	Trade Show	Nov-95	Nov-95	Red Deer, AB	Don Chinski, ED&T - 427-4809
Canadian International Farm Show	Trade Show	06-Feb-95	09-Feb-95	Toronto, ON	Matt Collins, ED&T - 427-1905
Empire Farm Days	Trade Show	08-Aug-95	10-Aug-95	Seneca Falls, NY	Matt Collins, ED&T - 427-1905
Ag-Quip Farm Show	Trade Show	Aug-95	Aug-95	Gunnedah, Australia	Rabin Mendis, ED&T - 427-4809
Outdoor Farm Show	Trade Show	Sep-95	Sep-95	Burford, ON	Matt Collins, ED&T - 427-1905
Amarillo Farm and Ranch Show	Trade Show	Dec-95	Dec-95	Amarillo, TX	Don Chinski, ED&T - 427-4809
Trade Show	Trade Show	Jan-96	Jan-96	Guadalajara, Mexico	Brian Westlund, ED&T-427-4809
National Farm Equipment Show	Trade Show	14-Feb-95	17-Feb-95	Louisville, KY	Matt Collins, ED&T - 427-1905
The 3-I Show	Trade Show	Mar-96	Mar-96	Garden City, KS	Don Chinski, ED&T - 427-4809
ConExpo	Trade Show	Mar-96	Mar-96	Las Vegas, NV	Greg Yaremko, ED&T-427-4809

Agriculture and Food

Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Agriculture and Food

* ***The agri-food industry is an integral part of Alberta's economy, accounting for 4.2% of GDP in 1993 and employing close to 105,600 people.***

* ***The U.S. is Alberta's largest export market; exports increased by 141% in the period 1988 to 1993. Exports were valued at $1.46 billion in 1993.***

* ***Japan is Alberta's second largest export market, with exports of $504 million in 1993.***

The agricultural industry in Alberta continues to face a wide variety of challenges and opportunities in the global marketplace. In 1994, the industry entered a new era in international trade. The new General Agreement on Tariffs and Trade (GATT) and the implementation of the North American Free Trade Agreement (NAFTA) have widened opportunities for market access. However, competition for these markets will be sharp.

Alberta Agriculture, Food and Rural Development (AAF&RD) is committed **to ensuring the existence of policies and services which support the sustainable growth and development of a market -driven agriculture and food industry.** Adding value to Alberta's commodities and products is the key strategy that can influence the secondary industry's ability to reach $20 billion in shipments. Alberta's industry must be on the leading edge if it is to respond to the needs of the global marketplace.

Through the *Creating Tomorrow* public consultation in late 1992 and early 1993, industry and government developed a shared vision of **Alberta's agriculture and food industry** as one which will be **profitable;** will be **globally competitive;** will be **environmentally sustainable;** and will **value its people.**

To help achieve the vision, Alberta Agriculture, Food and Rural Development has identified market-driven goals and strategies to support these efforts:

Goals:

- To improve the industry's ability to access and respond to domestic and world market opportunities.

- To increase the industry's ability to diversify and add value to the commodities it produces and the products it manufactures.

- To develop information and technology that improves industry competitiveness.
- To ensure the industry has access to needed technology, knowledge and skills.

- To strengthen the industry's capability to manage risk and uncertainty.

- To ensure responsible stewardship of the soil and water resources used by the industry.

- To ensure that public lands that are the responsibility of the Ministry are managed for the long-term benefit of the industry and the public.

- To manage the Ministry's financial and human resources and legislated responsibilities efficiently and effectively for the benefit of the industry and the public.

Strategies relating to these goals include:

- Encourage industry to investigate and take advantage of available opportunities in the global marketplace.

- Develop and advocate policies that allow the industry to be competitive and market driven.

- Advocate the reduction of constraints and distortions that inhibit industry's ability to access and respond to domestic and international markets.

- Work in partnership with others to develop opportunities, reduce constraints and encourage increased diversification and value-added in Alberta's agriculture and food sectors.

- Encourage and conduct research targeted at those areas with greatest potential for sustainable growth or significant improvement in efficiency.

- Conduct production, processing and marketing research, in partnership with others where possible, to generate and adapt relevant leading edge information.

- Encourage greater private sector involvement in funding and conducting research.

Geographic priority agri-food markets have been identified based on criteria of sales opportunities, value-added component, demographics, market access and relative competitive position. Each market has been considered independently, as well as the product priorities within those markets. Industry must take a lead role. Export market support to industry must focus on risk reduction, export readiness, market information, long-term potential, and market access issues.

The geographic opportunities based on the established criteria are as follows:

Major Opportunities

United States

The United States represents Canada's, as well as Alberta's, largest export market. Alberta's agri-food exports to the U.S. have risen from $596.6 million in 1988, the last year preceding the Free Trade Agreement, to $1.4 billion in 1993. This is an overall increase of about 141%. On an annual basis, the rate of increase was approximately 20%, with the largest increase occurring in 1992 when exports rose by 49%, to about 1.2 billion, from $787.7 million in 1991. Exports in 1993 compared to 1992 have risen 24%.

The positive effect of free trade on exports expansion is attributable to reduced tariffs and an improved trade environment because of greater security of access to the U.S. market. As a result of these factors, exports of many products have risen sharply, particularly value-added items such as beef, pork, processed meats and food products.

Significant regional markets exist for beef and pork breeding stock and meat, canola, potatoes, and wheat. The U.S. processed and semi-processed food market is highly competitive. Nevertheless, there are opportunities for high quality imports including specialty and gourmet food items, and products aimed at the ethnic, natural, nutritious and fresh food markets. Besides retail, growth is also expected in the U.S. foodservice industry.

Japan

Japan is Alberta's second largest trading partner with respect to agriculture and food after the United States. Alberta's agricultural trade with Japan has increased from $472 million in 1988 to $504 million in 1993. Bulk commodities such as canola seed, wheat and barley predominate. Alberta has made significant gains in increasing value-added agri-food exports to Japan over the period 1992 to 1993. Examples include a 28% increase in value of shipments of pork products, 36% in beef products and 82% increase in processed meats. Alberta's exports of processed foods to Japan have shown the most growth of all food categories.

Commodities maintain a strong position in the Japanese market, especially feed grains and feed (e.g. dehydrated alfalfa). Opportunities have been identified for specialty crops such as Ginseng and buckwheat. Higher value commodities (e.g. meat) and value-added products (e.g. processed foods and consumer-ready products) offer the greatest opportunities. Additional market research into processed meats and processed poultry will be undertaken.

Other Significant Opportunities

China

Alberta's agricultural exports to China were $113.76 million in 1993, making China Alberta's largest export market for primary agricultural products. The majority of these exports were wheat, barley (including malting barley), and cattle hides.

It is expected that China will continue to be a major market for Alberta's primary agricultural products in the short to medium term. The rapid expansion of China's economy (12% GDP, 1993) is expected to lead to further diversification of China's agricultural imports as it strives to expand and modernize its agricultural base.

Alberta's short-to medium-term objective in China is to expand the sale of plant (seed) and animal (semen, embryos, breeding stock) genetics and consulting services relative to the primary production of these products and their further processing into consumer products.

Alberta's twinning relationship with Heilongjiang is being utilized by a number of Alberta's plant and animal genetic and consulting service companies to gain initial access to the Chinese market.

Niche markets for food service beef, food processing ingredients, and some processed food products are expected to develop in coastal economic centres such as Shanghai where disposable incomes are significantly higher than in central China. International hotels are expected to drive most of this demand as local products are unlikely to meet their food standard requirements.

Mexico

Alberta, given its long-standing relationship with Mexico in the primary sector, is well positioned to build upon this credibility in the value-added and technology transfer areas. Trade between Alberta and Mexico is complementary in nature. Major imports to Alberta from Mexico include fruits and vegetables not produced in the province, and off-season vegetables. Alberta's major exports include livestock genetics, wheat, barley, canola, special crops, pork, and dairy products. Recent inroads have been made in semi-processed and processed foods, including processed grains for feed and human consumption, beverages, frozen french fries, and pork products. Further opportunities exist for processed feed products, technology transfer in a variety of sectors, and processed foods, including salad dressings, cheese, frozen and fast foods, microwaveable products, and beef. Mexico has free trade agreements or is negotiating such agreements with other Latin American countries, thus offering potential access to a broader Latin American market.

Taiwan

The Taiwan economy has shifted dramatically over the past several decades from an agricultural base to a growth-driven industrial economy. Agricultural production, which represented 30% of GDP 20 years ago, now claims 4% and it is expected to decline to 2.8% by 1996.

In 1993, Alberta exported $42 million worth of agri-food products to Taiwan. Major exports included hides, alfalfa meal and pellets, other feeds, canola cake and meal, and barley. As the largest exporting province of agri-food products to Taiwan, Alberta represented 33% of Canada's total export value in this category.

Taiwan is a growth market for processed feedstuffs and processed food products. Beef, beef by-products, canola oil based products, snack items and beverages are also considered growth product categories. Negotiations for Taiwan's accession to GATT offer opportunities to improve access for agri-food products. Corporate and distribution linkages into other Asian countries radiate from Taiwan, identifying Taiwan as a key entry point for products into other regional markets.

Emerging Opportunities

South Korea

Alberta's major export products to South Korea were feed wheat, cattle hides, canola meal and dehydrated alfalfa products. Korea's imports of further processed agri-food products are expanding, but they still represent a small portion of total agricultural imports. There is a lack of transparency in access requirements and an ongoing anti-import campaign. Alberta products which have potential in Korea, are barley, canola seed and oil, honey, water, pork and beef.

South East Asia

Markets included in the South East Asia region include Malaysia, Singapore, Philippines, Brunei, Indonesia, Thailand and Vietnam. These countries are characterized as having emerging economies and/or being on the verge of market liberalization, where market access and greater sales potential are possible. There will be continued emphasis on improved market access.

Eastern Siberia

Opportunities exist in contracting goods and services as development projects through international financing institutions, as well as in imports of processed and canned foods and technology transfer. Linkages are being established to develop markets for livestock genetics, forage crops, processing equipment, and agricultural machinery. In the long term, this market should see similar potentials as are currently developing in China.

Hong Kong

Hong Kong is an established market. The repossession of Hong Kong by China in 1997 is a dominant theme. "Basis Law" will maintain Hong Kong's role as a trans-shipment centre in the Asia-Pacific region. Alberta's exports to Hong Kong include raw hides and skins, beef, pork, wheat or meslin flour, fodder and feeds, refined canola oil and wheat. Corporate and distribution linkages radiating from Hong Kong will be evaluated to determine the key entry points and products for regional markets in South East Asia.

Latin America

A large number of Latin American countries are currently participating in regional trading partnerships such as Mercosur, Andean, CACM (Central American Common Market), and G3 pacts. These trading blocs have been formed to increase trade and reduce tariffs among partners. These relationships are viewed as an opportunity to improve regional global competitiveness. Alberta businesses are currently in these markets at the production and project development levels. From this base of activity, new markets will be identified for a wide range of products and services. Mexico is a key focus for long-term opportunities in other Latin American countries.

Eastern Europe & Former Soviet Union

Countries such as the Czech Republic, Poland, and Hungary are moving ahead successfully with economic reforms. In most instances, government support is needed in order to conduct business in these countries. Improved regional access into Former Soviet Union, Ukraine, and Kazakhstan presents opportunities for horticultural products, processed fruits and vegetables, pork, beer, wheat, canola, animal genetics, and special crops, meat, pulses, processed meats and dairy, meat and potato production, technology transfer and processing equipment and technology. Alberta companies have participated in these markets for both agricultural food products and services.

Western Europe

The European Union (EU) is growing and could become a 19-country market by 2000, with a population of 370 million, controlling over 40% of total world trade. The recent conclusion of the GATT agreement should provide improved access in a number of sectors, including fresh and processed fruits and vegetables, meat, whiskey, beer, wheat and canola. Alberta's major agri-food

exports to the EU in 1993 were horsemeat, oilseed cake and meal, wheat, canola, tallow, raw hides, honey, pulses and whiskey.

Other Opportunities

Limited and specific potential export opportunities in **Africa, Middle East, South Asia and Oceania (Australia/New Zealand)** exist for such agri-food products as livestock genetics, feed products, technology transfer and niche markets (Halal meats).

Strategic Directions

Actions and Key Results

Growth of marketing opportunities is apparent and government programs will facilitate industry in seizing these opportunities. Specific actions include:

- More emphasis on coordinated plans aligned with industry needs. Product Teams (beef, pork, poultry, horticulture, cereals, oilseeds, special crops, dairy, alternative livestock, forage, sheep and horse) will address opportunities, issues and programs in consultation with industry.
- Continued development of the capability to conduct market research and collect, analyze and transfer market information, in partnership with others.
- Continued focus on policy and trade issues (i.e. access) in areas with the greatest potential for growth and development of Alberta's agriculture and food industry.
- Advocating changes to marketing, handling, and transportation policy and regulations and operations to improve access to priority markets for key products.
- Recommending changes to domestic policies and programs to allow industry to make effective/efficient use of opportunities arising from international agreements.
- Continued encouragement of industry to expand its networking to improve effectiveness in the international marketplace.
- Continued promotion of programs that improve market readiness.
- Continued assistance with trade shows, promotional activities, and outgoing and incoming business investment missions.
- Supporting improved safety, quality, and consumer acceptance of Alberta agriculture and food products.
- Increasing the availability of strategic market information for use by industry for business planning purposes.
- Increasing efforts to encourage greater industry market penetration in western North America and northern Pacific/Asia. Government support programs will be more proactive in Asia and reactive in the U.S., respecting the different cultures of the respective markets.
- Continuing to develop more diverse, higher-value production and processing in Alberta by encouraging and conducting research in value-added processing and new product development in priority areas.
- Continuing to encourage development of new products and processes targeted to meet global market needs.
- Encouraging industry to invest and take advantage of available opportunities in the global marketplace.

Key results and indicators to monitor the progress will include:

- Market share for priority products in priority markets.

- Value of direct investment in Alberta.
- Value added to agri-food products.
- Reduction of barriers to industry development and trade.
- Client awareness and knowledge of market opportunities.
- New products and processes adopted.
- Research and information development regarding economic potential.

The plan is the result of an extensive planning process with industry stakeholders. It will be responsive to continual feedback from clients and changes in the global industry and policy environment.

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Agriculture & Food

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
New Exporters - Grocery Products	Trade Show; Sponsored by IC	Apr-95		Seattle, WA	Dave Rous - Agriculture, Food & Rural Development (AF&RD) - 427-4241
Commercial Mission to Argentina and Chile	Mission; Sponsored by MAPAQ	Apr-95		Buenos Aires, Argentina	Dale Engstrom, AF&RD - 427-4241
Food Buyers' Mission from Fukuoka	Mission; Sponsored by DFAIT	Apr-95		Canada / Various	Ed Phillipchuk, AF&RD - 427-4241
The 9th International Food & Drink Exhibition (IFE)	Trade Show; Sponsored by MAPAQ	23-Apr-95		London, UK	Doug Bienert, AF&RD - 427-4241
Tecnotour'95	Trade Show; Sponsored by DFAIT	May-95		Havana, Cuba	Dale Engstrom, AF&RD - 427-4241
Incoming Food Buyers' Mission from the Philippines	Mission; Sponsored by DFAIT	May-95		Alberta Vancouver, BC Montreal, PQ Toronto, ON	Penny Mah, AF&RD - 427-4241
NEBS to FMI - Chicago	Seminar/Trade Show; Sponsored by DFAIT	7-May-95		Chicago, IL	Doug Bienert, AF&RD - 427-4241
FMI Trade Show & Mission	Trade Show; Sponsored by N.S.	7-May-95		Chicago, IL	Doug Bienert, AF&RD - 427-4241
FMI Trade Show	Trade Show; Sponsored by DFAIT	7-May-95		Chicago, IL	Doug Bienert, AF&RD - 427-4241
National Restaurant Association Show	Trade Show; Sponsored by DFAIT	20-May-95		Chicago, IL	Doug Bienert, AF&RD - 427-4241
Outgoing Livestock Mission - Royal Show	Trade Show; Sponsored by N.B.	Jun-95		London, UK	Doug Bienert, AF&RD - 427-4241
Pork Congress	Seminar/Trade Show	Jun-95		Red Deer, AB	Elton Dunk, AF&RD - 427-4241
Texas Food Service Expo	Trade Show; Sponsored by Ontario	25-Jun-95		Dallas, TX	Elton Dunk, AF&RD - 427-4241
Market for Specialty Meats Study & Seminar	Seminar; Sponsored by Ontario	Jul-95		Western Europe	Doug Bienert, AF&RD - 427-4241
Agro Expo-Fair	Trade Show; Sponsored by DFAIT	Jul-95		Bogota, Colombia	Dale Engstrom, AF&RD - 427-4241

ACTIVITY CALENDAR: Agriculture & Food

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Calgary Stampede	Rodeo/Show	Jul-95		Calgary, AB	Elton Dunk, AF&RD - 427-4241
Summer Fancy Food Show	Trade Show; Sponsored by DFAIT	9-Jul-95		New York, NY	Doug Bienert, AF&RD - 427-4241
9th World Congress of Food Science & Technology	Congress/Trade Show; Sponsored by IUFoST	30-Jul-95	04-Aug-95	Budapest, Hungary	Ed Bristow, AF&RD - 427-4241
NEBS Mission - Grocery Products to Minneapolis	Seminar/Trade Show; Sponsored by DFAIT	Aug-95		Minneapolis, MN	Dave Rous, AF&RD - 427-4241
California Grocers' Association	Trade Show; Sponsored by DFAIT	Sep-95		Los Angeles, CA	Dave Rous, AF&RD - 427-4241
Best of Canada - Trade Show	Trade Show; Sponsored by MAPAQ	Sep-95		Atlanta, GA	Doug Bienert, AF&RD - 427-4241
California Grocers	Trade Show; Sponsored by DFAIT	Sep-95		San Diego, CA	Dave Rous, AF&RD - 427-4241
Best of Canada	Trade Show; Sponsored by MAPAQ	Oct-95		Chicago, IL	Doug Bienert, AF&RD - 427-4241
ANUGA	Trade Show; Sponsored by DFAIT	Oct-95		Cologne, Germany	Doug Bienert, AF&RD - 427-4241
Eastern Dairy-Deli-Bakery Association Show	Trade Show; Sponsored by MAPAQ	Oct-95		Edison, WI	Elton Dunk, AF&RD - 427-4241
National Swine Congress	Trade Show; Sponsored by DFAIT	Oct-95		Mexico	Elton Dunk, AF&RD - 427-4241
Solo Food Show	Trade Show; Sponsored by DFAIT	Oct-95		Mexico City, Mexico	Elton Dunk, AF&RD - 427-4241
POLAGRA/95	Trade Show; Sponsored by DFAIT	6-Oct-95	11-Oct-95	Warsaw, Poland	Ed Bristow, AF&RD - 427-4241
Private Label Manufacturers (PLMA)	Trade Show; Sponsored by DFAIT	Nov-95		Chicago, IL	Doug Bienert, AF&RD - 427-4241
Canadian Food Festival - Solo Fair	Trade Show; Sponsored by DFAIT	Nov-95		Brussels, Belgium	Doug Bienert, AF&RD - 427-4241
Mission to Canada Food Expo - Miami Conference	Trade Show/Conference; Sponsored by DFAIT	Nov-95		Miami, FL	Dale Engstrom, AF&RD - 427-4241
Havana International Trade Fair	Trade Show; Sponsored by DFAIT	Nov-95		Havana, Cuba	Dale Engstrom, AF&RD - 427-4241
Farmfair	Trade Show	Nov-95		Edmonton, AB	Elton Dunk, AF&RD - 427-4241
Seattle - How to Access U.S. Agri-food Market Info	Seminar; Sponsored by DFAIT	Dec-95		Vancouver, BC	Dave Rous, AF&RD - 427-4241
North American Seed Potato Seminar	Seminar; Sponsored by N.B.	Dec-95		Various	Elton Dunk, AF&RD - 427-4241
H.R.I. Show - Mexico	Trade Show; Sponsored by Expo of Americas	Jan-96		Mexico City, Mexico	Elton Dunk, AF&RD - 427-4241
Boston -Best of Canada	Trade Show; Sponsored by DFAIT	Feb-96		Boston, MA	Doug Bienert, AF&RD - 427-4241

ACTIVITY CALENDAR: Agriculture & Food

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
NEBS to Boston Solo Food Show	Seminar/Trade Show; Sponsored by DFAIT	Feb-96		Boston, MA	Doug Bienert, AF&RD - 427-4241
ANTAD EXPO '96	Trade Show; Sponsored by DFAIT	Feb-96		Guadalajara, Mexico	Elton Dunk, AF&RD - 427-4241
Canola Oil Promotion	Promotion Show; Sponsored by DFAIT	Feb-96		Taiwan	Ab Barrie, AF&RD - 427-4241
Upper Midwest Hospitality Show	Trade Show; Sponsored by DFAIT	18-Feb-96		Minneapolis, MN	Dave Rous, AF&RD - 427-4241
Buffalo - Solo Food Show	Trade Show; Sponsored by DFAIT	Mar-96		Buffalo, NY	Doug Bienert, AF&RD - 427-4241
Foire agricole de David	Livestock Trade Show; Sponsored by DFAIT	Mar-96		David, Panama	Dale Engstrom, AF&RD - 427-4241
New Exporters to Mexico	Seminar; Sponsored by DFAIT	Mar-96		Mexico/Various	Elton Dunk, AF&RD - 427-4241
Foodex '96	Trade Show; Sponsored by DFAIT	Mar-96		Makuhari	Ed Phillipchuk, AF&RD - 427-4241
Solo Food Show	Trade Show; Sponsored by DFAIT	Mar-96		Osaka, Japan	Ed Phillipchuk, AF&RD - 427-4241
International Fancy Food (West)	Trade Show; Sponsored by DFAIT	3-Mar-96		San Francisco, CA	Dave Rous, AF&RD - 427-4241

Architectural, Engineering and Construction Services

Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Architectural, Engineering and Construction Services

* ***Alberta's AEC industry employs approximately 120,000 people in both full-time and seasonal work.***

* ***The Construction component is expected to provide $9.3 billion of services in 1994.***

* ***Alberta's AEC sector has world-class skills in both broad areas such as hydrocarbon development and niche specialities such as cold weather construction.***

Definition

The AEC sector can be defined as architectural, engineering and construction services used in the planning, design, construction and project management of residential, commercial, industrial and institutional buildings and facilities, including transportation and municipal infrastructure. This sector also integrates closely with other sectors such as Environmental Services and Energy.

International Overview

World trade in services was estimated at over $800 billion in 1990 and between 1975 and 1985 the average annual rate of growth in services was 8%. In the services sector in general, four characteristics are prominent:

1. Globalization

   - New service export opportunities and challenges are emerging as a result of new trade policies.

2. Financing

   - Success on capital project bids is increasingly tied to the ability to bring financing to the project.

3. Product - Service Linkage

   - The distinction between products and services is becoming increasingly blurred and the two are often inseparable in production and sale.

4. Partnering, Networking and Alliances

   - Increased partnering activity is occurring by forming joint ventures between firms from various countries or by forming strategic alliances either domestically or with firms from a particular country. This helps to expand expertise, capacity, cultural sensitivity, and therefore, competitive capability for project proposals.

In 1993 the value of services exported from Alberta to countries outside Canada was estimated at $1.9 billion, an increase of 8.8% over 1992. Included within the services classification are the Architectural, Engineering and Construction (AEC) service components which have significant potential in the export market.

Alberta's AEC services sector faces some common problems in its attempt to expand and compete in the international marketplace. The major competition for Alberta AEC services is other provinces, the U.S., and specific European OECD countries such as Britain, France and Germany. Some competition is also emerging in the newly industrialized countries (NICs) such as Mexico, Korea, India and some of the South American countries.

Specific trade barriers tend to involve foreign investment requirements, financing support, and government procurement policies. Other factors include professional qualifications recognition, environmental legislation, building codes and materials standards and specifications that may be unique to a certain country.

While it is difficult to measure the trade in services with specific countries, the Asia-Pacific region,

where international finance institutions (IFIs) figure prominently, should present increased business opportunities for the Alberta and Canadian AEC sector as should IFI projects in developing countries. New service opportunities are also starting to emerge as a result of new trade policies, multilateral trade negotiations and changing political doctrines. Mexico, India, Latin America and Eastern Europe are areas of immediate and future potential.

Alberta Position

- The AEC sector underlies much of the key provincial economic activity.
- The significant participation of this sector in the development of Alberta's infrastructure and industrial economy has positioned it for increased exports.
- There are extensive industrial benefits in Alberta that would not exist without the local presence of AEC services.
- Alberta's AEC sector is a knowledge-based industry that will help Alberta export into the 21st century.

Architectural Services

The architectural services industry comprises private firms licensed under provincial legislation to provide independent architectural design and consulting services to the public. Alberta architectural firms are generally small businesses. Approximately 85% of the firms have 10 or less employees. In total, Alberta's architectural industry employs over 2,000 people. Architects are broadly trained individuals. They design buildings for residential, commercial, light industrial, institutional, healthcare and medical, educational, recreational, sport, cultural, hospitality, transportation and religious purposes. Their expertise can also be applied in areas such as: facility management, building programming, construction, restoration, renovation, planning and green architecture.

Consulting Engineering Services

The approximate number of professional engineers practising in Alberta is 22,000. A major component of the professional engineers is the consulting engineering service industry and it is this category that is primarily responsible for the export of these engineering services. Currently, Alberta's consulting engineering industry employs an estimated 6,500 people in approximately 500 firms with estimated annual fee billings of $1.2 billion. More than 80% of the firms are classified as small (less than 20 staff) and many of theses are single or dual-disciplined. Alberta's large multi-disciplinary firms are capable of handling a wide range of projects and include both domestic and foreign firms.

Construction Services

The construction industry is defined as consisting of firms and specialized tradespeople engaged in the building, renovation, repair and demolition of immobile structures and in the alteration of natural topography. In Alberta's construction industry there are approximately 13,000 employers registered with the Workers' Compensation Board, approximately 4,500 of which are registered companies under the Corporations Act. These firms employ nearly 80,000 full-time employees and another 15,000 workers during peak periods. The Alberta construction industry is expected to provide roughly $9.3 billion worth of services during 1994. Alberta's construction industry is characterized by a large number of small firms, with a full-time staff of 20 or less people.

Industry Consultation

Industry consultation is an important and integral component of the sector strategy. This consultation assists in:

- creating a long-term positive business climate;
- creating a constructive and cooperative partnership between government and industry with definite roles for each partner; and

- ensuring that the activities of government relate to AEC services and effectively integrate and support Alberta's AEC industry.

This sector strategy encompasses a program of industry consultation based on the principle that: **Private sector partners will drive the ongoing direction of this strategy and what services will be provided.**

Industry consultation for the plan consisted of:

- AEC Sector Workshops. Two sets of AEC sector workshops (eight workshops) were held in the fall of 1994 in both Edmonton and Calgary.

- Industry Association Interviews. Seven Industry Associations that represented a broad scope of Alberta's AEC services were interviewed.

- This partnership will continue to be implemented through ongoing consultation, monitoring and measurement of its outcomes.

World-Class Skills

During the industry consultation, Alberta's AEC industry partners identified their world-class skills. These are:

Architecture

- Residential Housing
- Land Development
- Corporate/Office Buildings
- Building Envelope Technology
- Educational Facilities
- Tourism/Recreation Facilities and Support Services
- Industrial/Manufacturing Support Facilities
- Health Care Facilities and Systems
- Restorations
- Agriculture Support Facilities
- Project Management
- Functional and Operational Planning

Engineering

- Hydrocarbon Exploration, (Development and Processing)
- Public Infrastructure
- Tourism/Recreation Facilities and Support Services
- Industrial Facilities
- Building Envelope Technology
- Thermal Power Generation and Co-generation
- Pipelines and SCADA Systems
- Water Resources Development
- Project Management
- Conceptual Planning of Industrial Capital Projects

Construction

- Project and Construction Management
- Cold Weather Construction
- Public Infrastructure (e.g. Roads And Highways)

Objectives

The overriding goal is to increase both the volume and variety of products and services exported beyond Alberta's borders to an increased number of markets.

The development of strategies for the AEC sector requires the identification of some common AEC objectives that will help guide Alberta Economic Development and Tourism in its partnership with the AEC industry in Alberta. Objectives and strategies are also used to help establish performance measures against which progress can be monitored and evaluated. Based on the workshop information the objectives are:

1. To increase profitability.

2. To increase global competitiveness and exports.

3. To build or strengthen strategic alliances, networks and partnerships.

Market Challenge

The market challenge facing the AEC sector is to **Identify and develop new market opportunities in order to sustain and improve:**

- The depth and breadth of professional services and trade skills.

- Industry profitability and competitiveness.

- The significant economic spin-offs from AEC activity.

- The development and application of sustainable technology.

Elements of Success

The AEC workshops identified a number of factors that influence a company's/sector's ability to bid on a particular project or participate in a particular market. One of the overriding comments on success made by the workshop participants was that the capability to secure projects was "built on establishing relationships" or, as one participant stated, "face to face not fax to fax". The predominant factors for success identified were:

1. Financing

    - Risk Financing
    - Bid Support Financing
    - End User/International Project Financing

2. Market Intelligence (both geographic and project)

3. Identification of Qualified and Reputable Contacts or Agents in Potential Markets

4. Identification and Formation of Alliances and Partnerships (domestic & foreign)

5. Marketing Skills

6. Cultural Awareness of Potential Markets

Other factors identified were:

- International Awareness of Alberta AEC Sector
- Procurement Policies
- Qualifications Recognition/Professional Credentials
- Codes, Specifications and Standards
- Foreign Investment Rules/Business Establishment Rules/Contracting Rules
- Legislation and Regulations
- Technical Expertise (includes Identification, Acquisition, Transfer and Application of Technology)
- Cost Competitiveness
- Taxation Structures
- Long-Term Focus
- Establishing Foothold Using "One Big Win" in each Major Market
- Using Strategic Tools such as the Beijing Petroleum Training Centre

The export demand for AEC services is largely dependent upon three factors:

1. The ability to provide a demonstrated and recognized capability

2. The ability to secure joint ventures or strategic alliances with regionally based counterparts or complementary businesses.

3. Competitive financing

Strategic Directions

Based on the success factors, sector objectives, and the workshop information, strategies and activities for achieving the government/industry partnership have been identified. These are presented in Table 1, with the predominant success factors highlighted in bold print.

Table 1
Sector Strategies

Elements of Success	Strategy
Financing • **Risk Financing** • **Bid Support Financing** • **End User/International Project Financing**	Support the efforts of Alberta AEC businesses to access export financing. To accomplish this the partnership will: • Undertake discussions with AOC, Alberta Treasury Branch , the Chartered Banks, CIDA and EDC to: – improve access to export and project financing – determine markets of mutual interest to the financial institutions and Alberta's AEC sector. • Examine existing market development programs (e.g. PEMD, MDAP) to determine if both improvement to the programs and simplification of the submission and approval process can be accomplished. • Increase liaison and AEC advocacy with international financial institutions (ADB, ERDB, World Bank) to gain better export financing considerations. • Identify innovative methods and sources of financing for AEC projects and transmit this information to the industry.
Marketing/Market Intelligence • **Identification of Qualified and Reputable Contacts or Agents in Potential Markets** • **Cultural Awareness of Potential Markets** • International Awareness of Alberta AEC Sector • Codes, Specifications and Standards • Foreign Investment Rules/Business Establishment Rules/Contracting Rules • Legislation and Regulations • Taxation Structures • Procurement Policies	Support the development of awareness and promotion tools and programs to make international markets aware of Alberta's AEC services and companies, including any specialized expertise. To accomplish this the partnership will: • Pilot the development of a " **Team Alberta Exporter**" umbrella initiative that will: – provide exporting or export-ready companies the diplomatic support from the Alberta government where required in order to enter markets or secure projects or contracts. – assist in consortia development. – transmit potential project information throughout Alberta's AEC sector in a timely manner. – promote Alberta as a place that provides complete and integrated operating facilities by showcasing Alberta plant and infrastructure. • Continue support for the development and promotion of Alberta's AEC sector strengths and expertise in project construction and facilities management. • Promote the awareness of Alberta's Centres of Excellence in the world-class strengths that Alberta's AEC sector exhibits. (e.g. Calgary Centre of Excellence in Project Management, Alberta /Fort McMurray Centre of Excellence in Heavy Oil). • Use such vehicles as twinning relationships, development of training facilities in export markets or the export of regulatory regimes to provide strategic entry into these markets. Improve the level and type of market intelligence gathered and its timely dissemination to Alberta AEC businesses.

<table>
<tr><th>Elements of Success</th><th>Strategy</th></tr>
<tr><td></td><td>To accomplish this the partnership will:

• Assist in identifying potential projects and work toward implementing effective and efficient methods of communication (electronic) of potential export contracts and opportunities to Alberta's AEC sector.

• Improve the level of market intelligence from the Alberta government's trade and marketing officers and international offices.

• Utilize existing information sources to provide initial market and competitor profiles and information that assists in determining market situation and risk. Provide this information to Alberta's AEC sector on a timely basis.

Develop a vehicle to facilitate the transfer of project and market opportunity information that is beyond the interest of the finder.</td></tr>
<tr><td>Partnering, Networking and Competitiveness

• Identification and Formation of Alliances and Partnerships (domestic & foreign)

• Cost Competitiveness

• Qualifications Recognition/Professional Credentials

• Technical Expertise (includes Identification, Acquisition, Transfer and Application of Technology)

• Long-Term Focus

• Establishing Foothold Using "One Big Win" in each Major Market

• Using Strategic Tools such as the Beijing Petroleum Training Centre

• Taxation Structures

• Procurement Policies</td><td>Support the development of technical and business skills, strategic partnering skills and networking programs for Alberta's AEC sector that provides them with increased expertise in identifying opportunities and achieving increased competitive success in international markets.

To accomplish this the partnership will:

• Emphasize incoming AEC-related Trade Missions to make them predominantly "business" oriented. Use Alberta AEC businesses to help identify market contacts and activities for these missions. Encourage company-sponsored incoming missions to receive as extensive an exposure to Alberta's AEC services as possible.

• Use outgoing missions to establish diplomatic contacts and create market entry opportunities.

• Develop and maintain a database on agent and firm credibility in designated export markets.

• Organize business skills training for Alberta firms to help them maintain and enhance competitiveness. Training topics can include total quality management, strategic planning, export marketing and development, language training and cultural awareness.

• Facilitate the development of consortia to enable Alberta firms greater access to international markets.

Support increased integration of Alberta's AEC sector in order to improve international competitiveness, effectiveness of industry associations, formation of strategic alliances and joint venture opportunities, as well as increased private sector/public sector cooperation.

To accomplish this the partnership will:

• Organize and lead AEC technology awareness missions for latest computerization and integration systems.

• Establish and facilitate networking sessions for the AEC sector which provide the opportunity to make contacts, meet foreign buyers, share knowledge and expertise and develop potential alliances for export purposes.</td></tr>
</table>

Elements of Success	Strategy
	• Assist in forming interest groups to help penetrate specific geographic markets. • Participate in a "Services" study that will establish benchmark information on Alberta's AEC sector. • ED&T will continue to promote the sourcing and use of Alberta products and services on private and public sector industrial projects in the province through implementation of the Alberta Industrial Benefits Strategy. Project owners are asked to adopt the strategy by developing and implementing a project industrial benefits plan which ensures that competitive Alberta firms receive a full and fair opportunity to compete. • The partnership will consider an initiative to facilitate the transfer of Alberta public sector expertise and technology to Alberta private sector firms. Placed in the hands of the private sector this expertise and technology could be a tool to enhance their capabilities or product/service offerings when competing in international markets. As an AEC sector advocate, the partnership will support intergovernmental negotiations that improve the ability of Alberta AEC service companies to compete in domestic and international markets. To accomplish this the partnership will: • Identify AEC export financing as a Trade Barrier issue to the federal government in regard to individual country support for competitor AEC services and strive to resolve this issue. • Identify in discussions with the federal government the concern of competitors using and linking Aid to Trade. • Support increased trade access through participation in, and support for, multilateral and free trade negotiations. • Support the Agreement on Internal Trade and work to ensure compliance by other jurisdictions and participate in future negotiations to expand and enhance the Agreement. • Collaborate with both the federal government and the other provinces to obtain information on potential projects and joint venture partners and clients. • Continue to support the **Team Canada** role in assisting Alberta's AEC sector to penetrate export markets.

Geographic Market Priorities

During the industry workshops, the participants shared their knowledge and experience on current markets and future priority markets. It was apparent that Alberta's AEC companies consider their market is the world on the basis of "going where the money and the projects are". Balancing this global perspective was the desire to have some export market focus in order to receive the greatest return on investment. This information has been analysed in terms of common market priorities for the entire AEC sector and for individual subsectors. The following market categories were developed.

1. **Current Markets -** Markets where the majority of AEC services are occurring. Some of these markets are also considered to be the future markets.

2. **Emerging Markets** - Markets where attention is needed to allow Alberta AEC services to make decisions on market potential and begin initial contacts. Usually requires a two to four year timeframe.

The markets, strategies and activities are outlined in Table 2.

Table 2
AEC Geographic Markets and Strategies

GEOGRAPHIC MARKET	MARKET TYPE	STRATEGIES
ASIA PACIFIC/ SOUTH EAST ASIA China, Japan, Malaysia, Thailand and Indonesia.	CURRENT MARKET	**Marketing/Market Intelligence** • Access and disseminate market intelligence of interest to the AEC Sector and identify regional opportunities. • Sponsor and support incoming Asia Pacific missions relating to the AEC Sector to ensure maximum sector exposure within Alberta. • Continue programs/briefings relating to export preparation with particular emphasis on cultural and language barriers. **Financing** • Assist in matching trade and investment partners for Asia Pacific projects in the AEC Sector. **Partnering, Networking and Competitiveness** • Actively encourage the export of Alberta regulatory regimes to this region in order to facilitate use of Alberta AEC services.
MEXICO	CURRENT MARKET	**Marketing/Market Intelligence** • Provide current, usable market intelligence to Alberta AEC companies in key project areas of expertise with a focus on industrial projects emphasizing AEC services for oil, gas and petrochemicals as well as environmental and municipal projects. • Organize and co-ordinate Alberta participation in trade shows and conferences in Mexico, the United States and Canada in order to demonstrate Alberta technology, equipment and services. • Assist the AEC companies in establishing a permanent presence in Mexico to optimize the effectiveness of their market development efforts. • Provide educational and learning opportunities through seminars, GeoFITT programs and NEWMEX missions to Mexico. **Financing** • Develop networks with organizations offering services such as financing to Alberta exporters. **Partnering, Networking and Competitiveness** • Identify key strategic alliance and joint venture opportunities. • Identify and invite key Mexican decision makers to Alberta to view capabilities and strengths, and to establish the credibility of Alberta companies.

GEOGRAPHIC MARKET	MARKET TYPE	STRATEGIES
INDIA	CURRENT MARKET	**Marketing/Market Intelligence** **Financing** **Partnering, Networking and Competitiveness** Industry to provide direction throughout implementation of strategy
UNITED STATES	CURRENT MARKET	**Marketing/Market Intelligence** **Financing** **Partnering, Networking and Competitiveness** Detailed strategies will be developed on a reactive basis with industry
ASIA PACIFIC/ SOUTH EAST ASIA Vietnam	EMERGING MARKET	**Marketing/Market Intelligence** • Continue market intelligence gathering activities related to economic profile, cultural and language requirements, political and legal considerations and potential partners. **Partnering, Networking and Competitiveness** • Continue to build on contacts in Vietnam and China to determine the potential for future needs related to AEC services.
EASTERN and CENTRAL EUROPE	EMERGING MARKET	**Marketing/Market Intelligence** • Undertake market intelligence and analysis related to economic, political and social prospects of individual countries. • Undertake market intelligence and analysis related to identifying lead companies and potential contracts, legislation and regulations and financing sources. Evaluate financing tools and the ability of these tools to help penetrate this market. • Make maximum use of available information on risk analysis of individual countries in order that Alberta's AEC sector can make informed decisions based on market intelligence. **Partnering, Networking and Competitiveness** • Improve the level of local contacts and networks with both specific incoming business-oriented trade missions and use of government representatives to explore specific 'on the ground' business opportunities. • Provide networking forums and opportunities to support known AEC firms working in Eastern and Central Europe to promote alliances.
SOUTH AMERICA	EMERGING MARKET	**Marketing/Market Intelligence** • Use Alberta AEC sector specialized strengths in key project areas as a basis for penetration of these markets; focus on the Industrial project category with emphasis on AEC services for oil, gas, petrochemicals, power generation, and infrastructure development and on environmental projects. • Improve market intelligence activities related to economic profile, cultural and language requirements, business practices, political and legal considerations and potential partners. **Partnering, Networking and Competitiveness** • Identify key strategic alliance or joint venture opportunities for projects within the identified categories and ensure that the appropriate Alberta AEC companies are promptly informed of these potential opportunities. • Improve the level of local contacts and networks with specific incoming business-oriented trade missions.

Economic Development and Tourism Role

As a partner with Alberta's AEC sector, the role of Alberta Economic Development and Tourism (ED&T) and its level of activity requires some clarification. This role of ED&T will focus on the following:

- Target its services to where it can effectively support Alberta's AEC sector.
- Act as an advocate, as a facilitator and, where necessary, as a co-ordinator for Alberta's AEC sector.
- Participate in those markets and activities where the highest and best impact will occur.
- Continue consultation with Alberta's AEC sector in order to be responsive to their needs and changing market conditions.

During the workshops some methods of implementing these roles were suggested. One broad-based approach was the activity of marketing Alberta and its quality of life, not just selling individual services. Some specific tools for government and ED&T were using diplomatic support, provision of timely market intelligence, assisting with establishing long-term market relationships, collaboration, partnering and teambuilding, sector promotion and awareness, exporting strategic training facilities and assisting with project financing. Some trade and technology awareness activities that can contribute to these areas are outlined in Appendix 1.

Monitoring

The market priorities outlined do not cover the full spectrum of markets where Alberta's AEC companies are active, such as Africa or the Middle East. The priorities represent those that are suitable to resources and capabilities. Markets are dynamic and priorities, to some extent, should be flexible to respond to a changing world. An example of this flexibility may occur in countries, such as Lebanon, that require reconstruction expertise during the next five years. During the course of the next year, regular industry consultations will direct where shifts may be needed.

Implementation

The implementation of this strategy requires the ongoing commitment of the partnership to address specific activities. Task force committees will be established to deal with priority areas such as Access to Financing, Networking and Partnerships, Market Intelligence, Promotion and Awareness and Competitiveness. Resource allocations within ED&T will reflect these priorities and the commitment to this partnership with the private sector AEC firms.

Performance Measurement

As part of the ongoing strategy process there is a need to measure the effectiveness of the strategies and activities outlined. To accomplish this, a set of performance measures need to be designed, administered and evaluated. As the activities outlined are resident to ED&T, it is not appropriate that the Department undertake the evaluation. During the workshops, agreement was reached that the **industry participants** would undertake the evaluation. Specific performance measures will be designed and include the following categories:

- Export training
- AEC incoming/outgoing trade missions
- Contracts signed resulting from trade missions
- Quality, quantity and timeliness of market intelligence provided
- Networking opportunities provided - strategic alliances formed
- Improved access to financing

Note: For further information relating to the process and background used in the preparation of this strategy please contact Alberta Economic Development and Tourism at (403) 427-4838.

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Architectural, Engineering & Construction Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Strategic alliances with Newfoundland companies	Environmental Alliances	Apr-95	Ongoing project	St. John's, NFLD	John Jacobson, ED&T - 427-1905
New Exporters To Border States Mission	Environmental companies; training for new exporters	Apr-95	Approx. date	Boston, MA	John Jacobson, ED&T - 427-1905
Second International Fair - Wood Processing for Construction Industry	Wood processing flow lines, machining complexes, decorative finishing equipment	18-Apr-95	22-Apr-95	Moscow, Russia	Mietka Zieba, ED&T - 427-4809
Waste Expo '95	Environmental trade show	26-Apr-95	28-Apr-95	Chicago, IL	John Jacobson, ED&T - 427-1905
Sibex Building Products Show	Federal Government Participation	May-95		Singapore	Rabin Mendis, ED&T - 427-4809
Construction/Building Materials Buyer Mission	Incoming Mission from Taiwan	May-95		Canada	Jay Tam, ED&T - 427-4809
American Institute of Architects National Convention	Architecture/Interior Design	05-May-95	07-May-95	Atlanta, GA	John Jacobson, ED&T - 427-1905
Toronto Environmental Trade Show and Conference	Trade show conference	09-May-95	10-May-95	Toronto, ON	John Jacobson, ED&T - 427-1905
New England Enviro. Expo	Environmental trade show	09-May-95	11-May-95	Boston, MA	John Jacobson, ED&T - 427-1905
Second International Fair, Cottage - 95	Cottages, farm, garden houses - building materials and structures for construction of private and low storeyed houses	23-May-95	27-May-95	Moscow, Russia	Mietka Zieba, ED&T - 427-4809
Construction Products Show	Solo Canadian Show at Canadian Business Centre	05-Jun-95	09-Jun-95	Mexico City, Mexico	Brian Westlund, ED&T - 427-4809
AEC Systems Conference and Exhibition	Exhibits and technical presentations on computerization for architects, engineers and contractors; Manufacturing Expertise/Technology Awareness Program	Jun-95	Jun-95	Atlanta, GA	Roly Ferris, ED&T - 427-2005
Eco Expo	Environmental trade show	Sep-95		Boston, MA	John Jacobson, ED&T - 427-1905

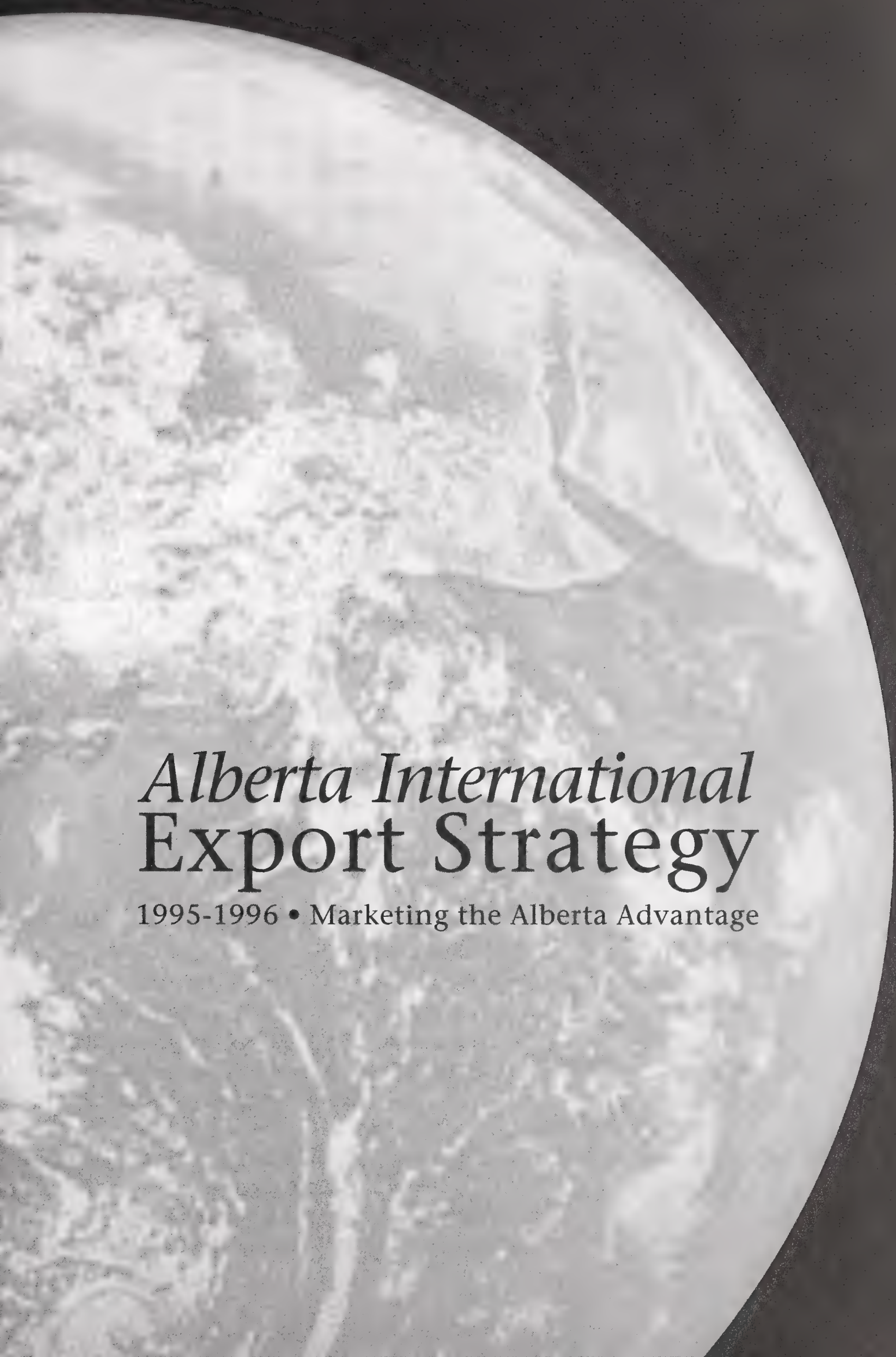
ACTIVITY CALENDAR: Architectural, Engineering & Construction Services

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Trade Mission and Exhibition	Partnering Mission with the State of Alaska to identify construction opportunities	Sep-95		Russia, Far East, Eastern Siberia, Moscow	Mietka Zieba, ED&T - 427-4809
American Public Works	Government Procurement	Sep-95	Approx. date	Chicago, IL	John Jacobson, ED&T - 427-1905
International Construction Fair Stroimarket 95	City buildings and architecture, building materials and products, construction equipment	12-Sep-95	18-Sep-95	Moscow, Russia	Mietka Zieba, ED&T - 427-4809
5th International Exhibition Architecture, Building Materials and Construction Manufacturing Techn/Building Equipment	Features exhibits highlighting the latest powersaving and wasteless technologies to produce building materials and construction	12-Sep-95	18-Sep-95	Moscow, Russia	Patricia Piironen, ED&T-427-4809
IMIQ'95	Conference and Trade Show Sponsored by the Mexican Chemical Engineers Association and PEMEX for Petrochemicals, Energy and Environment	Oct-95		Mexico City, Mexico	Brian Westlund, ED&T - 427-4809
Project Management Institute Symposium	Technical Program, Networking and promote AB Project Management; Manufacturing Expertise/Technology Awareness Program	13-Oct-95	19-Oct-95	New Orleans, LA	Roly Ferris, ED&T - 427-2005
Water Enviro. Federation	Environmental	23-Oct-95	25-Oct-95	Miami, FL	John Jacobson, ED&T - 427-1905
Leipzig International Construction Trade Fair	Exhibits building materials, technology, finishing materials and construction equipment	25-Oct-95	29-Oct-95	Leipzig, Germany	Bob Tunis, ED&T - 427-4809
Inter-Build Wood Products Show	Building and construction event to reach the European market	Nov-95	Nov-95	Birmingham, England	Heather Doyle, ED&T - 422-6236 Behrouz Sadre-Hashemi, ED&T - 427-4809
Society of Manufacturing Engineers - Autofact	Industrial Products	14-Nov-95	16-Nov-95	Chicago, IL	John Jacobson, ED&T - 427-1905
Canada Environment Show	Canadian Environmental Technology, Equipment and Services Show, Canada Business Centre	17-Jan-96	19-Jan-96	Mexico City, Mexico	Brian Westlund, ED&T - 427-4809

ACTIVITY CALENDAR: Architectural, Engineering & Construction Services

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Services Exhibition	Canadian Engineering, Business and Professional Services Show, Canada Business Centre	13-Feb-96	15-Feb-96	Mexico City, Mexico	Brian Westlund, ED&T - 427-4809
National Manufacturing Week	National Design Engineering Show; Manufacturing Expertise/Technology Awareness Program	Mar-96	Mar-96	Chicago, IL	Roly Ferris, ED&T - 427-4809
International Control Engineering Expo and Conference	Industrial Controls	12-Mar-96	15-Mar-96	Chicago, IL	John Jacobson, ED&T - 427-1905
National Design Engineering Show	Industrial Products	12-Mar-96	15-Mar-96	Chicago, IL	John Jacobson, ED&T - 427-1905
National Plant Engineering and Maintenance Show	Industrial Products	12-Mar-96	15-Mar-96	Chicago, IL	John Jacobson, ED&T - 427-1905
National Association of State Purchasing Officials (NASPO)	Government Procurement	24-Mar-96	28-Mar-95	Nashville, TN	John Jacobson, ED&T - 427-1905
Incoming delegation	Construction mission	Summer 1995		Armenia	Patricia Piironen, ED&T-427-4809
Reverse NEBS - Architects	Export training for Architects interested in selling their services into the U.S.	To be confirmed		Alberta	Audrey Albrecht-Lee, ED&T - 427-4323

Arts and Cultural Industries



Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Arts and Cultural Industries

* ***The Arts and Cultural Industries contributed $1.3 billion directly to the Alberta GDP in 1992/93. An additional indirect contribution of $.6 billion resulted in a combined impact of $1.9 billion (Statistics Canada, working paper, Regional Economic Impact of the Arts and Culture Sector).***

* ***The sector accounted for 58,302 direct jobs and a combined total of 79,678 direct and indirect jobs in Alberta in 1992/93 (Statistics Canada, working paper, Regional Economic Impact of the Arts and Culture Sector).***

* ***It costs only $20,000 to generate a job in the arts, compared to $100,000 for a job in light industry and $200,000 in heavy industry (The Arts and Economic Development: Department of Communications; Statistics Canada; Canada Council).***

Definition

This sector is divided into two major groupings - "The Arts" and "Cultural Industries" each of which is further subdivided into key segments.

The Arts grouping includes visual, performing and literary arts, commonly known as the Fine Arts. The Cultural Industries include independent film, video, television, sound recording, book, and magazine production and distribution.

National and International Overview

A dynamic arts and cultural community is critical when people decide where to live and work. As with any other industry which provides such a significant contribution to society, underlying public and private investment and support are essential.

Arts and Cultural Industries make an important contribution to many national economies globally. They are responsible for generating $15.9 billion in direct impact on the Canadian GDP, and a combined direct and indirect impact of $23.8 billion (Statistics Canada, working paper, Regional Impact of the Arts and Culture Sector).

This contribution equates to 460,900 direct jobs at a national level, or over 660,000 direct and indirect jobs.

The globalization of this sector has increased the level of competition as well as the rewards for success. Arts and Cultural Industries are seeking creative mechanisms to increase sales and funding support, such as the use of merchandizing items both to promote their products and to increase revenues.

Increasingly, individuals, companies and their activities are becoming integrated because of new technologies, delivery mechanisms and growing demand for their products and expertise in the "information age". Multi-media products are prime examples of the increasingly blurred boundaries between film, music, performance and literary activities. An example of integrated technology is the production of entertainment software, which in 1994 was valued at $1.5 billion in Canada (Royal Bank, 1995).

The Arts and Cultural Industries are made up of individuals who are creators, and who therefore need to protect their intellectual property. Retaining copyright is becoming increasingly important as the expansion of multi-media provides additional opportunities for use of creative materials.

Alberta Position

Arts and Cultural Industries are interdependent and interrelated in both their activities and their products. Each depends on the health and stability of the other in order to grow and flourish.

Some examples of Alberta's many strengths in this sector include:

- The Banff Centre with its internationally recognized Publishing Workshops, the only ones in Canada.

- The Banff International Television Festival, one of the two most important in the world, for its marketing, co-production opportunities, and celebration of excellence.

- The National Screen Institute (NSI) in Edmonton, for its annual production of the international "Local Heroes" Screen Festival, as well as professional film training through workshops and mentor guidance. The NSI is one of only two professional film training organizations in Canada.

- The Edmonton Fringe Festival, the third largest in the world in 1994.

- Three Albertans, who in 1994, won the prestigious Governor General's Award in Literature.

Arts and Cultural Industries development in Alberta has been directly supported through several government agencies, including the Alberta Foundation for the Arts (AFA), the Alberta Motion Picture Development Corporation (AMPDC), and the 1992-1996 Canada/Alberta Cultural Industries Agreement (CAIO).

The **challenge** for Arts and Cultural Industries is to replace diminishing government support by creating partnerships with private sector funding, marketing and investment assistance.

Trends toward co-production and growth in national and international sales have increased opportunities, but the costs of marketing and doing business from Alberta are often higher than from other areas of the globe because of the distance from major markets and personal nature of working in this sector.

THE ARTS - An Overview

Steady development and growth in size and revenue of organizations in performing, visual, and literary arts over the past 30 years are important indicators of cultural achievement in Alberta. Alberta's post-secondary institutions offer a competitive array of arts programs and training opportunities, and are a major factor in developing a skilled and professional arts community.

The arts sector employs a highly trained and educated workforce, and provides a talent pool for other cultural industries. The arts sector is seeking long-term growth through more effective marketing. The Canadian Arts Consumer Profile, completed in 1992, provides a comprehensive arts audience profile that can assist arts companies in developing long-term domestic planning strategies.

Challenges for the arts sector include finding new sources of funding support, increasing below-average incomes for professional artists, responding to growing competition for leisure time, and responding to increasing costs of production.

Despite economic challenges, Alberta has a strong domestic arts industry which is complemented by the success large and small arts organizations have achieved in visiting abroad and in attracting increasing tourist dollars. High quality talent and expertise, along with an extensive infrastructure of presenting and other arts facilities in the province, provide a strong base for further growth and success in Alberta's Arts industries.

Visual Arts

The visual arts include the fine arts (painting, sculpture, printmaking, photography, and drawing), crafts (wood, clay, glass, fibre, and metal), and design (graphic, interior, industrial, fashion, landscape and architecture).

Alberta has an active visual arts community. There are 22 public art galleries and 223 commercial art galleries and craft outlets in Alberta. Estimated annual attendance figures for all gallery exhibitions is 1,789,000. Of these visitors, 669,000 attended commercial galleries.

Major visual art shows like The Works in Edmonton attract close to 400,000 annually, 20% of whom are visitors from outside Edmonton. Calgary's Visual

Arts Week has an annual attendance of an estimated 200,000. Similar events in mid-sized communities throughout the province, such as Red Deer, Lethbridge and Grande Prairie, all have attendance figures of around 5,000 each.

The Alberta Craft Council (ACC) indicates annual sales of $80 to $100 million of hand-made crafts in Alberta by approximately 8,000 craft producers (Economic Impact Study, December 1994). The ACC is currently developing marketing strategies to make these products more available to the tourism industry.

Trends indicate that arts and cultural industries are making increasing use of the latest technological advances in advertising and promotions (i.e., videos, CD ROM). The Alberta Foundation for the Arts has produced a series of video programs and promotional spots featuring visual artists whose works are represented in the Foundation's art collection. These programs have been seen on ACCESS and ITV in Alberta, and on CBC nationally, cable stations and the American PBS.

Performing Arts

Performing Arts include dance, music, theatre, opera, and performance art. In 1991, there were 46 professional companies in Alberta or 11.6% of the national total. Revenue from these companies was estimated at $36.8 million in 1991. The leading arts activity in Alberta is attending theatre.

Arts Festivals are a major growth area for visitor attraction with 30 held annually in the province. In 1992, Alberta Arts Festivals (not all festivals are included) grossed $7.6 million with an attendance of 1.2 million people. The 1990 Alberta Non-Resident Travel Exit Survey showed that 540,982 or 13% of visitors to the province attended fairs and festivals.

In 1992/93, 28 performing arts companies in Calgary had expenditures of $28.5 million, which in turn generated an estimated province-wide economic impact of $54.9 million and an estimated 968 person-years of employment (Calgary Economic Impact Study on the Performing Arts).

The Edmonton Professional Arts Council (EPAC) reported that in 1992/93, their 40 member organizations employed 829 people, and attendance at their events was 1.6 million.

Literary Arts

The literary arts include playwriting, fiction, non-fiction, writing for youth, writing for radio, television and film script writing, and poetry.

Alberta writers serve a cross-section of corporate communications functions producing annual reports, brochures, and advertising. Writers serve the book publishing industry as well. The talents of Alberta writers have also been utilized in the major growth that is occurring in the film and television sector. There are an estimated 2,500 Alberta writers currently making some form of income from their writing.

The number of Alberta authors has doubled every decade since 1950. There are now more than 625 published freelance writers in the province. Alberta's list of recognized authors is the fourth largest in Canada.

A key challenge in this area is to have more Alberta writers represented in film, television, and electronic media.

CULTURAL INDUSTRIES - An Overview

The products created by the cultural industries - films, videos, television programs, books, magazines, tapes, compact discs, CD ROMs - are the most influential forms of cultural expression, entertainment and communication in the world today. They are at the heart of the technological revolution and create the products for the "information highway".

Cultural industries provide an opportunity for Albertans to see themselves, reflected through the products created. The rest of the world knows about the province and its people through stories, songs and moving pictures created in Alberta by Albertans.

Thirty book publishing companies in the province publish approximately 150 titles a year. Annual sales are reported at a minimum of $20 million, of which about 75% are exported outside Alberta, including 20% internationally (BPAA report, 1993).

Magazine publishing accounted for direct annual expenditures of $25 million and 586 jobs in the province in 1991 (Periodical Industry Study, 1991).

Sound recording is growing quickly in Alberta with 11 full-time and nine part-time sound recording studios, which are now making national and international sales and distribution deals. The industry's estimated value in 1991 was $12.3 million (Balcon, 1993).

The entire commercial film and television industry in Alberta (including corporate video, broadcaster and commercial production) was estimated to be worth $70 million in 1992 (Coopers and Lybrand, 1993). Potential exists for significant growth over the next five years.

Media Arts, the production of artistic films, videos and commercials, continues to grow in the province. Foreign film production attracted to Alberta has contributed significantly to the economic diversification of the province.

Film/Video/Television Production and Distribution

Indigenous Production

The Alberta-based film and television industry is one of the strongest growth sectors of the economy. There has been a dramatic increase in motion picture and television production by Alberta independent production companies over the last three years - 360%. Recent studies indicate it is 15% cheaper to shoot film and television product in Alberta than in other parts of Canada.

Between 1988 and August 1994, the estimated direct and indirect impact of AMPDC's investment in Alberta film and television products included 3,507 new jobs. On average, between 1988 and August 1994, for every $1 invested from AMPDC another $11.08 was attracted into Alberta small business film and television production companies.

The wealth generated by this industry impacts on all Albertans in every corner of the province. From actors to truck drivers, from Lac La Biche to Waterton, all Albertans and all communities in Alberta benefit from the direct and indirect economic effects of having independent Alberta film and television production companies working here. For example, '*Strange and Rich*' was filmed in Thorsby, Edmonton, Stony Plain, Lake Eden, Spruce Grove, Leduc and Wetaskiwin. Over $2 million of economic activity was triggered in the province as a result of a $150,000 investment in this production by AMPDC. The production employed the on-screen and off-screen talents of 107 Albertans.

With the advent of the 500-channel universe, the demand for television programming is insatiable, positioning Alberta for continued dramatic growth in its ongoing efforts to create wealth and jobs for Albertans.

Media Arts

Alberta has five artist-run production centres with 640 members, of whom 220 are producing members. The centres provide equipment, financial and creative support to independent film and video artists and receive some operating assistance from the Alberta Foundation for the Arts. Production grants are also provided by the Foundation to assist with creative projects. In 1993-94, 70 films and videos were produced in Alberta with the support of the Media Arts centres. Approximately 30 workshops and public screenings were provided.

Media Arts activity is a parallel activity to the motion picture industry. Within the context of the industry, these artists are professionals. The centres encourage an individual and independent approach to film and video making. Frequent research is undertaken in the process of production. Artist-run centres play an important role in the provision of professional training in film and video in Alberta. The Media Arts are at the cutting edge of experimentation and use of new technologies and creative ideas in film and video making.

The Media Arts community has, until recently, focused on production. In 1994, an initiative was undertaken to develop exhibition and distribution opportunities.

Foreign Attraction

A strong Alberta industry, which includes a skilled labour pool and infrastructure, combined with scenic landscapes, are key selling features in encouraging foreign productions to shoot on location in Alberta. Companies from Japan, Hong Kong, France, Germany, Sweden, India and, notably, Hollywood, have been attracted to Alberta for film and television production. Prestigious theatrical releases, such as *Superman I, II, & III, Little Big Man, Unforgiven* and *Legends of the Fall,* and television productions, such as *Lonesome Dove: The Series, Small Sacrifices* and *Ordeal in the Arctic,* showcase Alberta in theatres and television screens worldwide.

From 1988-92, productions by foreign companies shot on location in Alberta generated $111 million worth of economic activity, creating 1,847 jobs. In 1993, on-location productions spent $32 million in Alberta communities. There was even more dramatic growth in 1994, with over $50 million in the first eight months spent directly by foreign companies in Alberta communities and small businesses and on Alberta's skilled actors, craftspeople and technicians.

Sound Recording

Four underlying elements make up the legal and financial base of the sound recording industry: song and recorded-sound copyright ownership, production, promotion and distribution. Alberta has 20 recording studios with the technical and creative ability to create world-class recordings. However, the industry needs assistance in strengthening and building Alberta-owned companies to promote, market and distribute sound recordings. This includes those created with Alberta facilities and talent.

In Alberta, the music business, including domestic and foreign, represents $306 million of direct and indirect economic activity, or approximately 8% of the total Canadian activity of $4.1 billion (Statistics Canada, working paper, Regional Economic Impact of the Arts and Cultural Sector). The challenge for the Alberta industry is to increase its share of the Canadian activity.

The standard cost of each compact disc (CD) unit is $10 wholesale. If copyright on an intellectual property is owned and produced in Alberta for sale and distribution worldwide, approximately 80% of the revenue from that unit will **remain** in the province. With music being a multi-billion-dollar industry worldwide, the potential to build a global industry in Alberta is substantial.

Constraints to growth and maintaining national competitiveness include inadequate protection of intellectual property rights, lack of bridge funding, and limited funds to invest in product, developing and upgrading equipment, and personnel.

Book Publishing

The last formal study of the Alberta book publishing industry was completed in 1985 and a new survey is being done in 1994-95. The 1984 study pointed out that in 10 years the industry had grown from six to 25 companies, including educational, trade, literary and speciality publishers. In 1993, the Book Publishers Association of Alberta reported a membership of 30 companies.

Access to the Canadian market is a major challenge for Canadian and Alberta publishers, whose main competition is multinational companies from other English-speaking countries. The Canada/Alberta Agreement on the Cultural Industries and the Alberta Foundation for the Arts have assisted Alberta companies to compete nationally and internationally in all aspects of publishing, including product development, sales, marketing and distribution systems and professional development.

International marketing of existing titles and co-publishing opportunities are crucial for company survival. Alberta companies have become international market leaders in some genre areas and Alberta books have been nominated and have won several prestigious national and international prizes

over the past five years. A healthy publishing industry supports ancillary industries such as graphic arts, printing and computer-based publishing techniques.

Opportunities exist for the development of new products to meet the demands of evolving delivery mechanisms, such as CD ROM and CDI.

Magazine Publishing

The magazine industry in the province is emerging as an important contributor to the Alberta economy with approximately 180 titles. At present, one third of these titles have more than half their readership outside Alberta. Market share in North America is steadily growing. The direct infusion of dollars into the Alberta economy was $25 million from Alberta magazine publishing companies in 1991. (Alberta Periodical Industry Study, 1991)

Magazine publishing provides one of the most important markets for Alberta writers and visual and graphic artists. An additional spin-off is a talent pool of writers who will provide the creative products needed for the "Information Highway".

Markets

North America, including the rest of Canada and the United States, is the primary market for Alberta's Arts and Cultural Industries.

In addition, the unique nature of the Arts and Cultural Industries means that there are many niche markets internationally for individual products or companies. These have not been listed, since they vary for each company and subsector.

Strategic Directions 1995/96

For the 1995/96 Alberta International Export Strategy Review, roundtables were held with industry and government representatives to assess the 1994/95 sector report and discuss industry needs.

While the products and services provided by Arts and Cultural Industries are varied, participants in the roundtables identified four key result areas to be addressed:

- *Market identification, penetration and distribution*
- *Training*
- *Financing*
- *Acquisition and development of intellectual property.*

Strategic directions, activities, and measurement criteria for these key result areas are outlined below.

RESULT AREA: Market Identification, Penetration and Distribution.

- **Strategic Direction:** Improve measurement of results and comparison with other provinces.

Activities	Measurement Criteria
Work cooperatively with other governments, departments and industry representatives to: • identify information gaps and research needs. • develop research proposals and seek funding to undertake research. • develop profiles of Arts and Cultural Industries in Alberta in consultation with other jurisdictions. • develop baseline information.	• amount and nature of statistics and information • cooperatively funded research, measured by amount of funding and number of partnered projects

- **Strategic Direction:** Establish a process for sharing market information on an ongoing basis.

Activities	Measurement Criteria
• industry and government representatives will meet and cooperatively develop an action plan, including obtaining information from such groups as federal and provincial international offices, trade officials, and industry.	• preparation and implementation of action plan • number of products sold or exposed in international markets • number of requests for information about Alberta Arts and Cultural Industries

- **Strategic Direction:** Identify opportunities and incorporate Arts and Cultural Industries in international marketing initiatives to maximize publicity and awareness.

Activities	Measurement Criteria
• industry and government jointly develop an action plan to increase awareness of sector by tourism, trade and commercial specialists and cultural industries development officers. • develop inventory of Alberta products promoted in international offices. • coordinate action plan with major stakeholders to place sector products in international offices. • Community Development will work with independent producers and distributors to assist in developing and marketing their product.	• number of joint marketing initiatives involving Arts and Cultural Industries • number of Alberta arts and cultural products promoted in international offices • number of sales of Alberta Arts and Cultural Industries products

RESULT AREA: Training.

- **Strategic Direction**: Work with industries to identify needs and develop training and education programs to assist Alberta artists and companies.

Activities	Measurement Criteria
Training programs to be considered in the following areas: • making products export ready. • developing proactive marketing skills appropriate to priority markets of interest. • developing technical skills. • developing business and management skills.	• number and nature of programs • number of participants in programs • client satisfaction with programs • number of exports • income levels • number of personyears of employment

RESULT AREA: Financing.

- **Strategic Direction**: Work with governments, agencies, and the financial community to encourage changes in investment climate.

Activities	Measurement Criteria
• meet with industry representatives to identify specific problems related to the financing of intellectual property and develop an action plan to address those problems. • develop coordinated approach to address issue by Alberta government with other sectors. • assist Arts and Cultural Industries to secure investment.	• changes in financing policies of financial institutions • funding from non-government sources • number of actions identified and acted upon • amount of investment in sector

- **Strategic Direction**: Work with industry to develop alternative and cost-effective funding mechanisms.

Activities	Measurement Criteria
• AMPDC and the Office of the Alberta Film Commissioner will work with filmmakers, unions and service providers to continue to build strategic alliances. • Arts and Cultural Industries Branch will work with companies and other agencies to build alliances.	• number of alliances formed

RESULT AREA: Treatment of Intellectual Property

- **Strategic Direction**: Work with the industries to ensure that appropriate intellectual property, neighbouring rights and copyright legislation is in place at the provincial, federal and international level to protect the rights of Alberta-based artists and companies.

Activities	Measurement Criteria
• prepare and distribute information on the current regulatory environment in identified priority markets. • identify industry infrastructure gaps and work to correct them. • work in cooperation with the Canadian Conference on the Arts to address intellectual property issues.	• legislation regarding treatment of intellectual property

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

Status Report for 1994/95 Strategy

The following is a status report on strategic directions identified in the 1994/95 Alberta Global Business Plan. Examples of activities and studies that have been undertaken are identified for each strategic direction.

- **Work with federal government and industry to develop provincial profiles of Arts and Cultural Industries and to develop better baseline information for improved measurement of results and comparison with other provinces.**
  - Alberta Community Development initiated Statistics on the Arts in Alberta; a comprehensive database to be updated annually.
  - A study on book publishing in Alberta is under way and should be completed by December, 1995.
  - AMPIA recently completed a study and a directory on the film industry in Alberta in partnership with the federal and provincial governments and industry.
  - Alberta Recording Industry Association (ARIA) will release a study on the sound recording industry in 1995 in partnership with the Canada/Alberta Agreement on the Cultural Industries.
- **Improve information sharing about international market opportunities.**
  - The Alberta Craft Council is preparing an Economic Impact and Strategic Development Plan - planned completion early 1995.
- **Increase collaboration with tourism, trade and commercial specialists in government and private sector to increase awareness of Arts and Cultural Industries to enable them to incorporate appropriate "arts" in marketing initiatives in order to maximize international publicity and awareness of this sector.**
  - Albertaworks, a directory of Alberta talent, services and facilities, was produced by the Canada/Alberta Agreement on the Cultural Industries and the private sector. The Office of the Alberta Film Commissioner purchased 500 copies to distribute worldwide.
  - The Office of the Alberta Film Commissioner prepared and presented to an industry roundtable in 1994 its annual marketing and advertising plan and sought cooperative advertising opportunities from the gathering.
  - "Alberta Location Manual", a new catalogue of Alberta film locations for distribution to major film producers, is being published.
  - With assistance from the Canada/Alberta Agreement on the Cultural Industries, 10 companies attended international market places and increased sales and co-productions.
  - The Alberta Foundation for the Arts has had promotional videos of Alberta visual artists shown on national and international television.
- **Enhance the capacity of arts and cultural industry firms to undertake international marketing of export-ready products, either on their own or in conjunction with other trade sector missions, trade shows, embassies, and so on.**
  - The Alberta Craft Council is developing marketing strategies to make products more available to the tourism industry. The Council is also developing the "Alberta Heritage Craft Project" to help producers of hand-made crafts target tourism markets such as museums.
- **Work with industry to develop education programs to assist artists in making products export ready, to encourage more co-operation by all players, and to develop more proactive marketing skills appropriate to priority markets of interest.**
  - The artist-run media centres in Alberta are developing a cooperative sales and distribution initiative.
  - A task force has been struck with the Office of the Alberta Film Commissioner, film unions, equipment suppliers and educational institutions to identify gaps and recommend training and resources to overcome deficiencies in crews.
  - With help from the Alberta Foundation for the Arts, artist-run media centres in Alberta have offered workshops in film and video production.
- **Help arts and cultural industries companies to market their export-ready products and to secure foreign investment through access to major market places and key festivals in Canada and the world.**
  - Projects assisted by the AMPDC, in 1993-94, received 10 Gemini and one ACE Awards nominations, this increases saleability.
  - The Banff Television Festival - an internationally recognized event - attracts record crowds every year affording Alberta companies the opportunity to meet with key decision makers from around the world and sell their product.
  - Attendance at the American Film Market, Locations Expo, and the Toronto Film Festival, resulted in 247 requests for information on everything from crews and facilities to accommodations and locations.
- **Work with government, agencies, and the financial community to encourage changes in investment climate.**
  - In December 1994, the federal government announced that legislation to amend the Copyright Act to include "Neighbouring Rights" would be tabled in the House of Commons early in 1995. Reform would include additional rights for producers, performers and broadcasters for certain uses of their creations, and a tax on blank tapes, the proceeds to go back into the sound recording industry.
  - In 1993-94, AMPDC was instrumental in breaking down interprovincial trade barriers between provincial funding agencies through consultation, negotiations and initiatives with other provincial and federal development agencies.

ACTIVITY CALENDAR: Arts & Cultural Industries

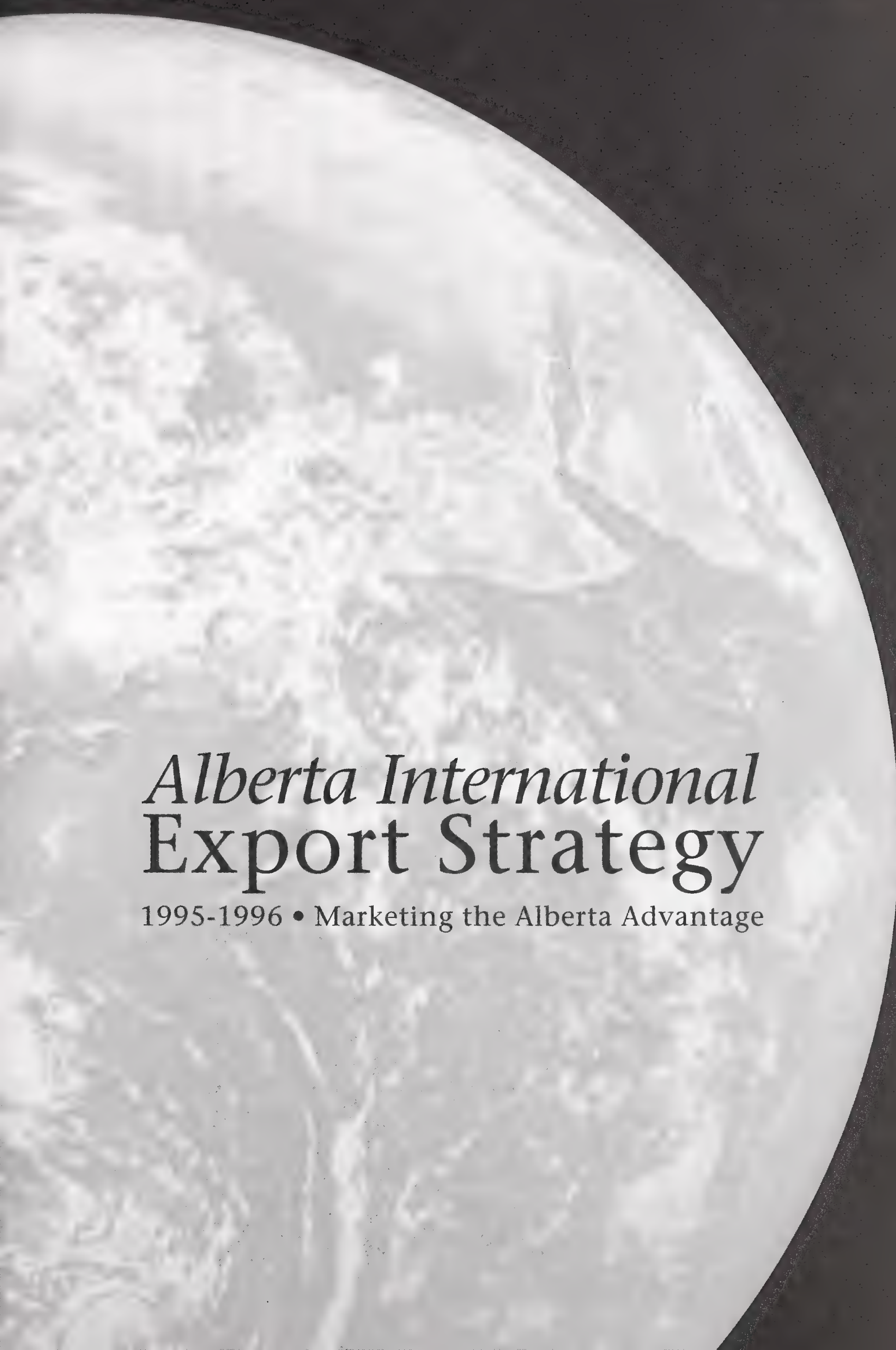
ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
New England study-printing equipment & services	Print/Graphics	Apr-95	Year's project	Boston, MA	John Jacobson, Economic Development & Tourism (ED&T) - 427-1905
Bologne Children's Book Fair (Fiera del Libro per Ragazzi)	Largest book fair of children's titles in the world held annually in Bologne.	06-Apr-95	09-Apr-95	Bologne, Italy	Jane Bisbee, Community Development (CD) - 427-6315
MIP TV	World's largest television marketplace.	14-Apr-95	20-Apr-95	Cannes, France	Lindsay Cherney, ED&T-427-2005
Hokkaido Exhibition	Exchange exhibition; 15th anniversary of official twinning of provinces.	May-95	Aug-95	Edmonton, AB	Gordon Gordey, CD - 427-6315
Music West	Annual Music Industry Conference/Marketplace	11-May-95	14-May-95	Vancouver, BC	Gordon Gordey, CD - 427-6315
Western Magazine Awards	Presentation of the annual Western Magazine Awards plus a day of professional development seminars	Jun-95		Vancouver, BC	Jane Bisbee, CD - 427-6315
American Booksellers Association Convention	95th Annual convention; the largest North American gathering	03-Jun-95	06-Jun-95	Chicago, IL	Jane Bisbee, CD - 427-6315
Magazines '95	Annual Convention of Canadian Magazine; includes the CMPA, the Canadian Business Press Association and Masthead Trade Show.	13-Jun-95	17-Jun-95	Toronto, ON	Jane Bisbee, CD - 427-6315
CBA 1995	Annual Convention of the Canadian Booksellers Association; largest Canadian trade fair for the book publishing industry.	13-Jun-95	17-Jun-95	Toronto, ON	Jane Bisbee, CD - 427-6315
Banff International TV Festival	TV Festival and Trade Symposium - one of largest in world	18-Jun-95	24-Jun-95	Banff, AB	Lindsay Cherney, ED&T-427-2005; Ruth Bertelsen, CD - 427-6315
International Festivals Association Trade Show	Festival and Trade Show	Aug-95	Aug-95	Stockholm, Sweden	Gordon Gordey, CD - 427-6315

ACTIVITY CALENDAR: Arts & Cultural Industries

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
CAPACOA (Canadian Arts Presenters Association)	Conference for Canadian presenters, artists and artist managers; forum for professional development and to experience Canadian talent.	Sep-95	Sep-95	Ottawa, ON	Dick Foose, CD - 427-6315
Western Alliance of Arts Administrators	Forum for presenters and artists in Western Canada and the U.S.; sessions on professional development; showcased artists.	06-Sep-95	11-Sep-95	Phoenix, AZ	Dick Foose, CD - 427-6315
Festival of Festivals	TV Festival and Trade Symposium	07-Sep-95	16-Sep-95	Toronto, ON	Lindsay Cherney, ED&T-427-2005; Ruth Bertelsen, CD - 427-6315
International Festivals Association Trade Show	Festival and Trade Show	23-Sep-95	27-Sep-95	St. Paul, MN	Gordon Gordey, CD - 427-6315
Vancouver International Film Festival & Trade Symposium	Film Festival and Trade Symposium - Important for mid-size companies	30-Sep-95	06-Oct-95	Vancouver, BC	Lindsay Cherney, ED&T-427-2005; Ruth Bertelsen, CD - 427-6315
New Art Forms In Chicago	Annual "cutting-edge" international craft show. Over 100,000 attendees.	Oct-95	Oct-95	Chicago, IL	Ross Bradley, CD - 427-6315
MIP Com	Television Film Sales and Marketing	Oct-95	Oct-95	Cannes, France	Lindsay Cherney, ED&T-427-2005
Frankfurt Book Fair	Largest and most important book trade fair in the world. 100,000 attendees.	14-Oct-95	16-Oct-95	Frankfurt, Germany	Jane Bisbee, CD - 427-6315
Association of Performing Arts Presenters Conference/ Trade Show	American national conference; professional development of presenters; practical sessions and timely information on issues.	Dec-95	Dec-95	New York, NY	Dick Foose, CD - 427-6315
Cinars '95	International Exchange for Peformers	Dec-95		Montreal, PQ	Gordon Gordey, CD - 427-6315
Pacific Northwest Booking Conference/Trade Show	Forum for presenters and artists in Western Canada and the U.S.; organize tours west of the Rockies with a focus on north/south relations.	Jan-96		TBD	Dick Foose, CD - 427-6315

ACTIVITY CALENDAR: Arts & Cultural Industries					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Sundance Film Festival	Film Festival	Jan-96	Jan-96	Park City, UT	Lindsay Cherney, ED&T-427-2005
MIDEM	International Record, Music Publishing and Video Music Market. Brings together over 9,000 of the world's music decision makers.	Jan-96		Cannes, France	Gordon Gordey, CD - 427-6315
NATPE (National Association & TV Program Executives)		Jan-96	Jan-96	Las Vegas, NV	Lindsay Cherney, ED&T-427-2005
Art Fair/Seattle	North American focus for commercial galleries representing artists.	Feb-96	Feb-96	Seattle, WA	Ross Bradley, CD - 427-6315
London International Book Fair	Largest European English language book fair. Important for mid-sized companies not at larger fairs.	Mar-96	Mar-96	London, England	Jane Bisbee, CD - 427-6315
Canadian Music Week	Canada's largest talent initiative, exhibition and awards (JUNOS)	Mar-96		Toronto, ON	Gordon Gordey, CD - 427-6315
Local Heroes International Screen Festival	International Festival and Symposiums	Mar-96	Mar-96	Edmonton, AB	Ruth Bertelsen, CD - 427-6315
Metier des Arts	An annual juried exhibition with a national invitational component.	Fall 96		Montreal, PQ	Ross Bradley, CD - 427-6315
Southex (International Craft & Giftware Trade Fair)	A bi-annual gift/craft fair. Cottage industry based; geared for mass production market.	Feb-96 Aug-95		Edmonton, AB Vancouver, BC	Ross Bradley, CD - 427-6315
Major Canadian Craft Fairs in Toronto & Ottawa	Retail marketing of limited production craft items.	Spring/Fall		Toronto/Ottawa, ON	Ross Bradley, CD - 427-6315

Biotechnology/Medical and Health Care Products and Services



Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Biotechnology/Medical and Health Care Products and Services

* ***The biotechnology, pharmaceutical, medical and health care products and services are emerging sectors in Alberta with tremendous potential for the future.***

* ***Alberta's infrastructure support and world-class research capabilities provide an environment in which strategic partnerships between universities, research centres and private industry can flourish.***

Definition

This sector is divided into two main groupings - Biotechnology and Medical Products and Health Care Services.

Biotechnology involves the use of naturally occurring or engineered biological systems for the production of goods and services. Commercial applications of biotechnology occur in a wide range of sectors; primarily health care, agri-food and, to a lesser extent, the environmental sector. Bio-industries in all three sectors are distinguished from their non-bio counterparts by their relatively high level of research and commitment to innovation. While bio-industries currently represent only a small segment of global economic activity, their tremendous growth and far-reaching implications for other sectors make them strategically important.

Health care is the primary market for biotechnological innovation at present, while agriculture and environmental protection are major emerging markets. Environmental protection has major implications for the forestry, energy and chemical industries. Growth potential in these sectors could eventually exceed that of health care.

Medical Products are used in the health care industry for diagnostic or therapeutic purposes, and do not include drugs or medicines. Health and Welfare Canada defines over 6,000 classes of medical products. Medical Products fall under a number of markets, including hospital and institutional, home care, scientific and laboratory, and safety.

The high technology segments of the medical products industry are strongly connected to biotechnology, advanced materials and information technologies. There are also linkages to other industrial sectors, including electronics, chemicals, machinery, textiles, plastics, glass, wood products and services.

Health Services include a wide range of professional services utilized by the government's laboratories, hospitals, community health agencies and insurance providers. Private sector services include laboratories, architectural, construction and engineering, consulting services (including information systems), environmental management, hospital support services, home care services, continuing care services (such as nursing homes) and distributors, including retailers and insurance.

Opportunities for medical products are understood to be in specific high-growth product niches, including home care and products for the aged and disabled, medical lasers, cardiovascular devices, biosensors, immuno-diagnostics, health informatics, and blood screening and handling products. More generally, cost-reducing and outpatient technologies will experience greater demand as all countries are faced with health care resource constraints.

International Overview

Biotechnology

Globally there are 3,000 to 4,000 firms which utilize biotechnology in some aspects of their products and services. They have combined annual sales of $5-7 billion and employ about 200,000 people. These companies represent the more broadly defined bio-industries. The number of companies whose core business involves

biotechnology is approximately 2,000 to 2,500 firms employing about 150,000 people.

The United States surpasses all other countries in the development of the biotechnology sector, leading in international research investment over the past several decades. Currently there are about 1,300 firms in the U.S. biotechnology industry. Japan trails the U.S. in commercializing biotechnology, but is achieving rapid growth in this area by importing research and technology from other countries.

Many biotechnology companies have been established in Europe through industry development programs.

Indigenous bio-industries are at early stages of development in the Pacific Rim and Latin America and most receive government support. There are opportunities to establish alliances that would provide access to these developing markets in return for technology and knowledge in the area of biotechnology.

In all geographic areas, long lead times and costly development and approval processes make business alliances essential for many companies in the biotechnology field. More than any other industry, biotechnology relies on the ability to develop international alliances for research, investment, and marketing.

The Canadian biotechnology effort is small when compared to that of the United States and Japan, but compares favourably with that of other countries. Approximately 300 companies, with employment of 13,000, form the broadly defined bio-industry in Canada. Some 120 Canadian firms employing 6,500 people have biotechnology as their core business. In 1993, the core biotech firms invested approximately $250 million in research and development (R&D).

The overall bio-industry in Canada is growing rapidly. From 1989 to 1993, sales grew at an annual rate of 24%, exports at 19%, and employment at 14%. In 1993, estimated total sales were almost $2 billion and exports approximately $750 million.

Canada has a world-class bio-clinical base in its medical schools and teaching hospitals. As a result, companies focused on biotech as applied to human health form the largest single group in the Canadian bio-industry. This group includes developers and manufacturers of diagnostic and therapeutic products, as well as suppliers of biologicals (antibodies, antigens, fine bio-chemicals). Canadian health biotech sales were approximately $1 billion in 1993. Exports were about $300 million and the industry employed an estimated 8,000 people.

Medical Products and Health Care Services

The world market for medical products is currently US $85 billion with a projected 7% annual growth rate through the year 2000. Certain segments such as home care may experience growth rates in excess of 20%.

The United States dominates nearly every field in the health care sector and is particularly strong in the more technologically advanced product areas. U.S. companies have made enormous commitments to R&D in medical technologies to develop this leading position. Many U.S. medical and health care companies are expected to expand overseas in the near future as a result of moderate growth in domestic markets.

The industry in Europe is characterized by a few large companies and many small enterprises specializing in closely related products in narrowly defined niche markets. Japan appears to be a growing market in the medical products sector, particularly in products for the elderly.

Research and development appears critical for the medical products industries. For smaller companies lacking significant financial resources to conduct wide-scale R&D, niche marketing appears to be the key. This is supported by the European experience. Focused R&D efforts through cooperative arrangements with other companies and research organizations are also possible.

Canada has been one of the world's leading consumers of medical products over the past 15 years. In 1991, the Canadian market was valued at $2.6 billion, imports accounting for $1.6 billion of this total.

The medical/health care industry in Canada consists of 800 companies producing 1,500 categories of products. One hundred of these firms are affiliates of foreign-owned multinationals. Although representing only 10% of the companies operating in Canada, subsidiaries of foreign-based multinationals dominate the Canadian marketplace. Most are larger companies which manufacture some product lines for the domestic market and also market and distribute parent-company products in Canada.

A number of Canadian subsidiaries are working toward influencing their corporate headquarters by requesting R&D or export manufacturing mandates. This would make their Canadian operations part of the corporate global strategy.

The remaining 700 Canadian companies are export-oriented, and are world leaders in technologies and innovative devices. The typical firm is small with sales less than $1 million and fewer than 20 employees. Total employment in the Canadian industry is 20,000. Unlike the multinationals, which are concentrated in Ontario and Quebec, many of these companies are located in Western Canada. Challenged by international competition, Canadian companies are expected to increasingly introduce higher value-added products to serve global markets.

International business development opportunities exist for both Canadian medical products manufacturers and health care service providers in the following areas: medical imaging, in-vitro diagnostics, assistive cardiovascular and orthopedic devices, health informatics, hospital construction, management and training.

Companies producing products that are sensitive to cost containment pressures, and firms focusing on the commercial development of other higher value-added devices, should be encouraged. The focus would be on the U.S. and European markets. Objectives will be to attract world product mandates to Canada from larger multinationals, as well as to establish international partnerships involving investment, marketing and technology with U.S. and European partners.

Opportunities also exist in Asian countries for design and construction of health care facilities. Hospital management expertise is also in demand and the U.S. is competing aggressively in this area.

Developing countries entitled to assistance from the International Financial Institutions (IFIs), including the World Bank, are an important source of contract opportunities for Canada's health care service providers.

Alberta Position

Biotechnology/Pharmaceuticals

In Alberta, biotechnology and pharmaceuticals focus on research and development. The provincial government is committed to advance this sector, spending more per capita on R&D in this sector than any other province in Canada. Funding is primarily through grants from the Alberta Heritage Foundation for Medical Research.

The result can be seen in Alberta's research-oriented universities and highly regarded technical training institutes. Alberta has new and superbly equipped biotechnology research facilities and medical science complexes; and a growing community of biotechnology/pharmaceutical companies, many based on partnerships involving government, university and the private sector. Alberta's research infrastructure and ability attracted industry funding of $20 million in 1993 in research funded projects. This investment in research is further enhanced by federal and other grant monies.

The extensive research conducted by Alberta universities, research institutes and centres has resulted in the development of spin-off companies. Included are: Alta Genetics Inc., Biomira Inc.,

Synphar Laboratories Inc., Synthetic Peptides Incorporated (SPI), CV Technologies Inc., Janus Pharmaceuticals, Biomira Research Inc., SPI Diagnostics Inc. and Neurospheres Inc.

Presently there are 15 Alberta companies in biotechnology employing about 500 people. Alberta exports are over $30 million annually and are divided between animal and human technology.

Medical Products and Health Care Services

Alberta has about 40 manufacturing companies competing in an array of medical product areas, including component parts for a number of end products. They are mainly small owner-operated firms, serving niche markets. Company size is usually in the range of five to 15 employees. These firms generate an estimated $35 million in annual sales, 80% of which are exports. Total employment is 250 people. The market segments in which Alberta firms have strengths include medical electronics, analytical and diagnostic products, disabled and rehabilitation equipment and services, health informatics, health waste management, and chemicals.

Alberta's existing strengths provide an attractive base for investment in the Alberta medical products industry. Among those strengths are: a favourable regulatory environment; highly skilled health scientists, researchers and technical personnel; and a well developed research, science and technology infrastructure. Under current trade agreements, Alberta has also emerged as an appealing gateway to the large North American health care market.

The province's health services sector has an important opportunity to develop a strong competitive edge in many growing international markets. This is especially true in the area of health services administration/management and delivery.

As part of its initiative to restructure and renew the health system, Alberta is moving to increase local decision making in health care management, provide more community-based care (including the retraining of health providers), enhance consumer choice, and increase health promotion and disease/injury prevention initiatives. Trade partners in the United States and developing countries are showing interest in these strategies.

There is potential to export Alberta's leading-edge expertise in health care management and delivery. Mexico, Latin America and Eastern Europe are possible markets for this expertise.

Alberta firms have been providing services to countries in the Middle East, principally Kuwait, the United Arab Emirates and Saudi Arabia, for a number of years. These markets, fueled by oil revenues and the corresponding increase in economic growth, have created opportunities for health care professionals, health care management and management consulting firms. In addition, professional recruitment firms are participating in the market. The expected growth in these countries' economies and the need to rebuild infrastructure in Kuwait, might present opportunities for Alberta providers of services. Several needs have been identified, including human resource management and primary health care.

Geographic Opportunities for Alberta Companies

United States

There are a number of areas of strength for Alberta firms that are showing tremendous growth in the U.S. marketplace. These include outpatient care, nursing home care, medical waste management, drug delivery devices, DNA probes, and minimally invasive surgical devices, among others.

In Washington state, there may be strategic alliance opportunities in joint research and development, cross marketing, joint clinical testing, manufacturing, and distribution in the biotechnology area.

Minnesota, with its thriving medical manufacturing industry, may offer opportunities for joint ventures or strategic alliances.

Russia

There is a good deal of interest among Siberian health care officials in establishing links with Alberta's medical professionals and facilities. In addition to offering training courses, Alberta has received requests for equipment and pharmaceuticals. The City of Tyumen alone bought $14 million worth of equipment and drugs last year. There has been a request for an Alberta company to establish an import agency to provide the Tyumen Oblast with medical supplies for hard currency. Alberta companies are participating in the building of hospitals and medical clinics in Russia. From these examples, it is evident that a number of opportunities are developing between Alberta and Russia.

Mexico

There is increasing interest in looking at future construction on a turnkey basis where the contractor would develop the site, build and equip the hospital.

There are opportunities for products used in the field of physiotherapy, including hydrotherapy, electrotherapy and ultrasound equipment. Treatment of respiratory ailments, cancer and heart disease and related complications is growing, heightening the demand for related devices, drugs and equipment.

Demand is expected to grow for products of low to medium technology. Setting up a local representative or agent, or establishing a Mexico partner, is key to entering the Mexican market.

Middle East - Arab and oil producing countries

Kuwait, United Arab Emirates and Saudi Arabia have substantial market potential for Alberta firms or consortia. Alberta firms have already capitalized on the rebuilding of Kuwait. Besides capital projects, the Middle East needs health care professionals, care management and management consultants.

Saudi Arabia has a significant five-year budget in the areas of primary care, preventive health services and upgrading of hospital systems.

Infrastructure Support in Alberta

A key Alberta advantage in these sectors is the excellent infrastructure support that has been developed in the province. This support structure allows for world-class research capabilities and strategic partnerships between universities, research centres and private industry. The following section highlights a number of Alberta's infrastructure strengths.

The Alberta Heritage Foundation for Medical Research (AHFMR)

The Alberta Heritage Foundation for Medical Research (AHFMR) contributes about $32 million annually to research efforts of more than 150 scientists, from both Alberta and throughout the world (primarily in the health care sector). These research efforts are in the fields of biotechnology, medicine, and pharmaceuticals. To date, Foundation funds have helped train hundreds of students and provide equipment for nearly 300 laboratories within the Universities of Alberta and Calgary.

Foundation-supported researchers in Alberta's universities and hospitals are discovering new ways to diagnose and treat diseases. The Foundation has invested in two major laboratory complexes, the Heritage Medical Research Buildings in Edmonton and Calgary. The Foundation's Technology Commercialization Program provides seed capital to researchers in Alberta-based businesses and universities for the development of new biomedical products and processes. The Technology Commercialization Program provides funding to Alberta firms and entrepreneurs, as well as to scientists, to support prototype development, testing of new drugs and devices in a laboratory environment, and clinical trials of promising new drugs and devices. Alberta was acclaimed by an

international board of review as one of the top 10 medical research centres in North America.

New health care products, new tools, and patentable techniques are emerging from AHFMR-supported labs. Projects funded by the AHFMR Technology Commercialization Program have formed the basis of new companies and led to some projects being patented and marketed.

Universities of Alberta and Calgary

Located in Edmonton, the University of Alberta (U of A) is Canada's second largest university. A widely recognized teaching and research institution founded in 1908, it has a full-time student enrollment of 26,000, including 3,300 graduate students. In 1993-94, the University attracted $87.2 million in research funding. Research support has increased by an average of 6% annually over the past several years, reflecting increased funding from private industry.

Biotechnology is a major initiative at the U of A, encompassing research in a wide range of medical and industrial applications. To coordinate activities in this field, an Advisory Committee in Biotechnology was established with representation from Immunology, Forest Science, Pharmacy, Pediatrics, Zoology, Chemical Engineering, Biochemistry, Soil Science, Microbiology and Genetics. Its mandate is the enhancement of biotechnology research and technology transfer. The University has encouraged the growth of research centres, spin-off companies, research chairs and graduate programs in biotechnology.

The University of Alberta Faculty of Medicine offers one of the nation's premier environments for medical science, due in large measure to the dramatic impact of the Alberta Heritage Foundation for Medical Research. Foundation support has enabled the Faculty to recruit outstanding basic science researchers and clinician-scientists from around the world. Approximately 100 new professors have also joined the Faculty since 1984.

The University retains its longstanding international reputation in biochemistry and immunology research while adding new strengths in such fields as lipids and lipoproteins, cancer, and neurosciences. It has recently established departments of Oncology, Medical Genetics, and Development and Molecular Neurobiology.

U of A research groups in Protein Engineering, Bacterial Diseases and NeuroScience function in the national Networks of Centres of Excellence program. The University of Alberta Diabetes Group, world leaders in transplanting insulin-producing islet cells, was named one of six North American Centres of Excellence by the Juvenile Diabetes Foundation International.

Through the work of a University of Alberta research team that developed a breakthrough Anti-Hepatitis B drug, Glaxo Canada Inc. committed $15 million to the Glaxo Heritage Institute for Virology Studies at the University.

The biomedical research program, which currently draws some $48 million in private and public sector funding (including approximately $10 million from industry), is conducted in a superb research environment. The Heritage Medical Research Centre is adjacent to the $650 million Walter C. Mackenzie Health Sciences Centre, a world-scale facility combining clinical care, medical training and research. Also part of this network are a half-dozen Edmonton health care research facilities, including the Cross Cancer Institute.

An Industry Liaison Office helps industry access U of A research. Many technologies have been developed at the University of Alberta as a result of extensive research and the University Technology Transfer Program.

The University of Calgary has established a strong medical research base. The overall objective is to ensure that advances in bio-medical knowledge are transferred to the clinical area to improve care given to patients with a variety of diseases. The ability to conduct patient-based investigations is greatly aided by the excellent relationship and

cooperation between the Faculty of Medicine, Foothills Hospital and Tom Baker Cancer Centre. The University has established strong research groups.

The University of Calgary has one of the largest and most respected groups of molecular biologists in Canada. Current activities under way in biotechnology relate to the genetic manipulation of plants to produce high value proteins. Work is also being done in the following areas: forest insect pest control using genetically altered viruses; a wide range of biotechnology applications/tools in the medical area, primarily in basic molecular biology; and the development of new drugs and vaccines.

The extensive R&D activities of the Universities of Alberta and Calgary have led to the creation of research institutes and centres which bring together experts to conduct world-class research and provide a means of coordination and cooperation among researchers.

The University of Calgary incorporated its technology transfer program into University Technologies International Incorporated (UTI, Inc.) in 1989. UTI is a wholly-owned subsidiary of the University of Calgary established to commercialize research. The mandate is to assist individuals from research-based institutions in Alberta to transfer projects with commercial potential into industry. UTI provides its clients with: assessment of the commercial potential of the product or technology and idea protection; market analysis; determination of the economic feasibility and commercialization recommendations; and negotiation of a mutually acceptable agreement for the inventor(s) and the client institutions.

UTI services a variety of clients and institutions including the University of Calgary, the Foothills General Hospital, the University of Lethbridge, Imperial Oil Resources, the Alberta Research Council, Agriculture Canada, Alberta Cancer Board, Defence Research Establishment (Suffield), and a small number of independent Alberta inventors.

Health Education and Restructuring

Alberta also has a strong base in educational training for the health sector. The Northern and Southern Institutes of Technology and Grant MacEwan College are highly regarded training grounds for other countries.

The province has hosted several visiting delegations of medical specialists from other countries and more delegations are planned for 1995. Delegates have attended training courses and established links with Alberta's medical professionals, teaching hospitals and universities. In addition to training courses, there have been requests for equipment and pharmaceuticals.

There is a growing interest in Alberta's health care system and reform initiatives. The provincial government's current initiative to restructure health workforce education will support the move to more community-based care. Areas such as Eastern Europe are keenly interested in educating their health personnel in the delivery of effective health care based in local communities.

Alberta Research Council

Biotechnology-based companies in Alberta can lower the capital costs associated with biotechnology product and process development by using the facilities and expertise available within the Alberta Research Council's Biotechnology Department. The Department acts as a valuable bridge between laboratory research and the production of new products. The biotechnology complex houses a scale-up fermentation pilot plant that is unique in Canada. The Department was established to encourage the development of new commercial biotechnology operations in Alberta. It has attracted widespread attention for its capability in the areas of microbiology, biochemistry, fermentation and scale-up, and plant tissue culture and physiology.

Healthcare Opportunities Metro Edmonton (HOME)

Healthcare Opportunities Metro Edmonton (HOME) was established in January 1992. It promotes growth of the health care industry by bringing together firms that are involved in any aspect of the industry. The Association acts as a forum for dialogue and education for its members and a catalyst for industry, research, health care providers, educators and government in promoting innovation in the health care products industry and in the commercialization of research for production and distribution in worldwide markets.

Calgary Association for Medical Products (CAMP)

The Calgary Association for Medical Products (CAMP) was formed in June 1993, to bring together manufacturers and suppliers of health care products and services in the Calgary area. With goals similar to the HOME organization in Edmonton, CAMP holds seminars and technical meetings, lobbies on behalf of its members, and informs members of business opportunities and government programs available to industry.

Industry Consultation

This year consultation with Alberta businesses was included as part of the International Export Strategy planning process. A number of workshops were held with interested companies and professionals to solicit their views on key strategies to help them expand and further participate in the global marketplace.

Medical products and health care industry participants highlighted a number of needs and opportunities for the sector, including:

Strategic alliances and flexible networks

- Relationships are the key to developing opportunities.
- Flexible networks and strategic alliances are needed.
- A better understanding is needed about what Alberta firms are doing and what are customer needs.
- Linkages are required between universities and companies. Medium-sized companies could benefit from partnerships with researchers, maybe jointly funded.

Marketing intelligence and expertise

- There is a lack of resources for marketing and intelligence gathering. There may be an opportunity for "umbrella marketing".
- One-stop-shopping for information federal/provincial/local would be an asset. The ideal would be a single government contact who can assess market opportunities and gather intelligence.
- Trade show experience is required. There is a need to have government partially sponsor, accompany and possibly rotate Alberta firms to targeted trade shows, such as the Medical Design and Manufacturing (MD&M) shows, to seek opportunities in manufacturing and to meet distributors.

Finding Opportunities

- Assistance is needed in finding opportunities for Alberta manufacturers of medical product components through a vehicle such as the Medical Design and Manufacturing (MD&M) shows.
- Firms supplying health services need to be made aware of projects, especially those requiring a complete package of design, planning, implementation and personnel. Alberta has the ability to pull together consortia of firms to bid on major projects, such as hospitals in the Middle East, Mexico or Russia. Many Alberta firms need to be made aware of global projects in a more timely manner.

- Alberta companies need information about potential projects, sales opportunities and alliance opportunities in global markets.

- Alberta's strong presence in global oil and gas markets provides a base for building relationships that will enhance trade opportunities in the health care sector.

Exposure

- Directories/information on Alberta companies and capabilities should be distributed globally, for example, through the 120 consulate offices around the world.

- Alberta products should be promoted in the provincial and Western Canada marketplace. Strengthening the local marketplace creates credibility for Alberta firms outside the province.

- A more structured positive image is needed to promote Alberta companies in the health care sector.

Strategies for the medical products, health care services, and biotechnology and pharmaceutical sectors were developed based on industry input and existing information about global industry trends.

Strategic Directions

The following strategic directions highlight priority areas which could facilitate sector growth.

Strategic alliances and flexible networks

Foster initiatives to create linkages, networks and consortia which encourage cooperation and information sharing between companies. Build on the strengths of the oil and gas sector to supply health services in markets where Alberta's oil and gas industry is strong.

Strengthening of Alberta's domestic market position

Explore initiatives to help replace imports with locally manufactured products. Increased domestic capacity will enhance stability and credibility which will then allow Alberta firms to capitalize on export markets. Local and regional hospitals can play an important role in assisting Alberta-based companies to build credibility and establish new health products that can be marketed within Alberta and around the world. Pilot-testing in hospital settings can lead to product innovation and new product ideas.

Marketing expertise and intelligence

Provide information and facilitate the development of marketing skills and marketing intelligence. Assist in the introduction of Alberta products into foreign markets. Activities requiring support in this area may include gathering international market intelligence and facilitating the formation of export consortia.

Medical products and health services export strategies

In cooperation with Alberta Health, develop a strategy which utilizes the strength of the health care system to assist firms within the sector to become more competitive.

Exposure

Develop effective communication tools to showcase strengths and capabilities of Alberta firms, including directories and the building of an "Alberta Advantage in health care" image.

Targeted geographic opportunities

Target a number of geographic areas which offer particular opportunities to Alberta's health care industry for trade and industry development initiatives.

Implementation

Strengthen Alberta's domestic position, foster strategic alliances and flexible networks

- Work with Calgary Association for Medical Products (CAMP) and Healthcare Opportunities Metro Edmonton (HOME) and the Universities of Alberta and Calgary to hold an intra-Alberta exposition where Alberta companies could display their products and services. The goal would be to encourage the interchange between commercial firms and university researchers.

- Facilitate the development of a pilot flexible network among Alberta companies.

- Develop a program to make health care purchasers in Alberta and other western provinces aware of Alberta's products and services. Assist in advising Alberta's Regional Health Authorities what products and services are available from Alberta companies. Coordinate with Alberta Health and industry associations.

Marketing expertise and intelligence

- Implement through Alberta Economic Development and Tourism (ED&T) and Western Diversification *Strategic Marketing for Success - A Mentoring Program for the Medical Products Industry* for Alberta medical products companies.

- Work with Industry Canada to hold presentations and workshops for Alberta firms that provide knowledge of various marketplaces (for example, Mexico or Saudi Arabia) or information on product offerings.

- Help Alberta firms to learn about potential projects by accessing international databases. For example, Economic Development and Tourism will help Alberta firms/consortia learn about IFI opportunities through the International Business Information System (IBIS), and government procurement opportunities in Canada, the U.S., and Mexico through registration on the Open Bidding System, Government Services Canada.

- Assist Alberta firms in increasing their understanding of how NAFTA, GATT/GATS and the ITA affect them in taking advantage of opportunities in foreign markets. Make firms aware of existing information on trading agreements available from Industry Canada.

Exposure

- Develop a marketing "package" for the sector, highlighting Alberta's collective strengths in biotechnology, medical products and health care services, as well as Alberta's tremendous infrastructure and research capabilities.

- Compile a Health Services Directory, to complement the Biotechnology/Pharmaceutical and Medical Products Directories that have already been developed by the department. Where possible, the department will help firms register with the recently introduced Industry Canada Database for Health Services.

- Coordinate efforts between provincial industry development officers and trade officers to showcase Alberta's strengths in research, infrastructure, and deliverability of products and services at trade shows and incoming missions.

- Explore the possibility of establishing a permanent showcase for Alberta's products and services so that the many important visitors to the province could be exposed to its capabilities in a relatively short time. Companies or industry associations would contribute to such showcases in permanent displays.

- Assist Canadian Embassies in orchestrating incoming missions.

- Encourage delegations to visit Alberta facilities and meet with medical specialists to develop relationships which will lead to business opportunities.

- Utilize Alberta hospitals and other health care, research and training facilities to showcase the Alberta Advantage in health care.

- Coordinate and accompany Alberta firms to a Medical Design and Manufacturing (MD&M) trade show, held in the United States, to expose companies to the tremendous opportunity for supplying components of medical products.

Biotechnology

- Explore support for expansion of Alberta Research Council's biotechnology pilot plant to produce clinical trial quantities of drugs for Alberta companies and Good Manufacturing Practices.

- Assisted in presenting the pharmaceutical showcase in Calgary in February 1995. Supported by Alberta ED&T, AHFMR and Western Diversification, this exposed University of Alberta and University of Calgary researchers and their work to major pharmaceutical companies. The goal is to attract funding from the companies for research projects of commercial interest.

Medical products and health services export strategies

- Develop a strategy between Alberta Health and Alberta Economic Development and Tourism to promote and market Alberta's health care products and services internationally, and assist firms in the health care sector to become more competitive.

- Liaise through Alberta Health and other provinces and territories to: provide an Alberta perspective in trade initiatives of other provincial health departments; assist in creating regional or national networks/alliances that can take advantage of major international contract opportunities; and assist Alberta health care firms to take advantage of economic opportunities in other provinces.

Targeted geographic opportunities

United States

Introduce Alberta companies to this marketplace through a "Strategic Alliance Partnership Seminar" and a reverse "NEBS" (new exporters to border states) mission, in cooperation with the Canadian Consulate in Minneapolis.

Russia

Encourage delegations from Russia to visit Alberta facilities and meet with medical specialists to develop relationships that will lead to business opportunities. Of interest to some Alberta firms is the international conference, exhibition, and workshop on the structure and delivery of health services, April 24-28, 1995, in Almaty, Kazakhstan.

Mexico

Assist Alberta firms in developing contacts in Mexico to represent their interests or act as agents. Annual trade shows of interest to companies in the medical devices and equipment sector include *Expo Medica, Medica Mex,* and *Expo Hospital.* A solo Canadian medical trade show is in the planning stages and will be scheduled for Mexico D.F. at the new Canadian Trade Centre for early 1995.

Middle East and Africa

Provide information on both the Saudi Medicare and Dentistry Show and the incoming buyers mission for medical equipment. The Saudi Medicare and Dentistry Show is scheduled for November 1995 in Riyadh and some Canadian participation is expected. The incoming buyers mission for medical equipment is scheduled for May 1995 and, across Canada, the purpose of the mission is for the African delegation to examine medical diagnostic equipment and supplies. South Africa will be making major investments in the medical and public health fields over the coming years. There are good opportunities for Canadian equipment, technology and services firms.

India

India has a rapidly expanding economy and a large expanding middle class. It has an oil and gas industry and is a recipient of Canadian International Development Agency (CIDA) funding. The Industrial Cooperation Branch of CIDA would be able to assist Alberta firms in establishing themselves with an Indian partner to penetrate the market.

Activities

The following section identifies specific activities, such as trade shows, missions, conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Biotechnology/Medical and Health Care Products and Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Alberta Health Care Service Providers Directory	Development of an Alberta Health Care Services Providers Directory	Feb-95	Apr-95	Alberta	Sanda Gheorghiu, Economic Development & Tourism (ED&T)-422-0561; Kathleen Blake, ED&T - 427-1905
"Strategic Marketing for Success"	Familiarization with necessary marketing skills, marketing strategies and action plans through "hands-on" advisory activities	01-Apr-95	01-Mar-96	Alberta	Sanda Gheorghiu, ED&T-422-0561
Canadian College of Health Services Executives, the Canadian Hospital Association and the Canadian Long Term Association Conference and Exhibition	Showcase of the latest health care products, services and technology	04-Jun-95	07-Jun-95	Calgary, AB	Sanda Gheorghiu, ED&T-422-0561; Kathleen Blake, ED&T - 427-1905
Seminar on Selling to the American Veterans' Hospital	In-bound mission to introduce Alberta companies to American Vetrans' Hospital Association representatives for investment and joint venture opportunities	04-Jun-95	07-Jun-95	Calgary, AB	Kathleen Blake, ED&T-427-1905
Reverse New Exporters To Border States (NEBS) - Health Care Products and Services	Export training for Alberta manufacturers and service providers in the health care sector	04-Jun-95	07-Jun-95	Calgary, AB	Sam Chow, ED&T - 427-4323
Health Care Annual Conference	Medical/Hospital	04-Jun-95	07-Jun-95	Calgary, AB	Sanda Gheorghui, ED&T-422-0561; Kathleen Blake, ED&T - 427-1905
Medical Design & Manufacturing East Conference and Exhibition	Showcase of a wide array of resources for manufacturers of medical products	06-Jun-95	08-Jun-95	New York, NY	Sanda Gheorghiu, ED&T - 422-0561 (for information)

ACTIVITY CALENDAR: Biotechnology/Medical and Health Care Products and Services					
ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Medical Devices Strategy Partnership Program, Canadian Consulate General, Seattle	Introduce Alberta medical devices companies to U.S. companies interested in strategic alliances and investment opportunities	Jun or Jul 95	Jun or Jul 95	Seattle, Wa	Sam Chow, ED&T - 427-4323
Medical Devices Strategy Partnering Program, Canadian Consulate General, Seattle	Outgoing mission to introduce Alberta medical devices companies to U.S. companies interested in strategic alliances and investment opportunities	01-Jul-95	01-Jul-95	Seattle, WA	Sam Chow, ED&T - 427-4323; Sanda Gheorghiu, ED&T-422-0561
International Medical Infomatics Association 8th World Congress on Medical Infomatics	Opportunities to network with participating companies and professionals about the health care industry's information technology needs	23-Jul-95	27-Jul-95	Vancouver, BC	Sam Chow, ED&T - 427-4323; Sanda Gheorghiu, ED&T-422-0561
New Exporters To Border States Mission (Health Industry Distributors Association)	Outgoing mission; network with members of the Health Industry Distributors Association; discuss selling health care products	Sep-95	Sep-95	Boston, MA	Kathleen Blake, ED&T - 427-1905
Medical Devices Showcase	Presentation of medical devices companies, technologies, university research and other capabilities to a mission of experts from U.S.	Sep-95	Sep-95	Edmonton, AB Calgary, AB	Sanda Gheorghiu, ED&T-422-0561
Incoming Biotechnology Mission	Facilitate joint ventures and investments between Alsace Development Corp. and a group of companies from Heidelberg, Germany, and Alberta companies	Oct-95	Oct-95	Alberta	Bob Tunis, ED&T - 427-4809
Ontario Hospital Association Annual Convention and Expo	Outgoing mission; comprehensive exhibition of health care products, equipment and services	01-Nov-95	09-Nov-95	Toronto, ON	Kathleen Blake, ED&T - 427-1905; Sanda Gheorghiu, ED&T - 422-0561
Medical Equipment & Pharmaceutical Catalogue Show	Canada Info Booth	01-Nov-95	01-Nov-95	Taiwan	Jay Tam, ED&T - 427-4809

ACTIVITY CALENDAR: Biotechnology/Medical and Health Care Products and Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Reverse NEBS - Health Care Assembly	Export training for Alberta manufacturers and service providers in the health care sector	Feb-96	Feb-96	Alberta	Sam Chow, ED&T - 427-4323; Sanda Gheorghui, ED&T-422-0561
Medical Devices Showcase	Presentation of medical devices companies, technologies, university research and other capabilities to a mission of experts from U.S.	Feb-96	Feb-96	Edmonton/Calgary, AB	Sanda Gheorghiu, ED&T-422-0561
Medical Design & Manufacturing West Conference and Exhibition	Showcase of a wide array of resources for manufacturers of medical products	06-Feb-96	08-Feb-96	Anaheim, CA	Sanda Gheorghiu, ED&T-422-0561 (for information)
Incoming French Medical Conference Delegation	Facilitate the selection of Alberta as the site of the next French Medical Conference	Mar-96	Mar-96	Alberta	Bob Tunis, ED&T - 427-4809
New England Health Care Assembly	Annual marketplace for products and services six state hospital associations, nursing facilities, and 47 allied groups of specialists	25-Mar-96	29-Mar-96	Boston, MA	Kathleen Blake, ED&T - 427-1905
SaudiMedicare '96	Outgoing mission; health care trade show and seminar; medicare products and services, dentistry, eyecare and laboratory sciences. Demand for trade show space is high. Book ahead	10-Nov-96	14-Nov-96	Riyadh, Saudi Arabia	Vic Hartfield, ED&T - 427-4327

Business and Professional Services

Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Business and Professional Services

* ***As of September 1994, the Business and Professional Services sector accounted for 154,600 jobs in Alberta. That represents 10.9% of Alberta's total workforce.***

* ***Employment in the Business and Professional Services sector increased by 18,700 employees in one year, from September 1993 to September 1994.***

* ***These service industries now operate in a tradable or potentially tradable, international environment.***

* ***This sector makes significant contributions to Alberta's value-added, contributing $7.5 billion to Alberta's GDP in 1992.***

Definition

Statistics Canada splits the services industry into five categories: travel, transportation and shipping, business services, government services and other services. In the *Alberta International Export Strategy 1995-96* the Business and Professional Services sector is a part of business services.

Business and professional services refers to services that are essential to the operation of all businesses. Business and professional services are either done internally by a division of a firm, or they are contracted to other businesses that specialize in providing these services. These services include: accounting, management consulting, financial services, business training, library services, advertising, media, communications, legal services, information services, and personnel services.

This strategy for the Business and Professional Services sector is concerned only with companies whose core function is to sell their services to other companies. This includes the products, systems and training that relate to the provision of these services.

International and National Overview

International

Services now play a large part in the economies of all developed nations. In 1991, global exports of commercial services reached $890 billion and accounted for nearly one-quarter of all world trade.[1] The value of service exports and imports among OECD nations grew more rapidly than trade in merchandise.[2]

The costs of being ignorant of the rapidly changing trade environment are high.[3] World agreements including GATT and NAFTA work toward removing barriers to the international flow of trade in services. Technology like Internet is changing the way information flows, and information is the key to the services industry. Globalization and information technology are forcing nations to realize that most services operate in a tradable or potentially tradable environment. These changes are occurring now and the implications for domestic services industries are significant. The changes will be measured in domestic employment, value of GDP and the balance of trade. The Alberta government is committed to helping Alberta businesses prepare and succeed in international markets.

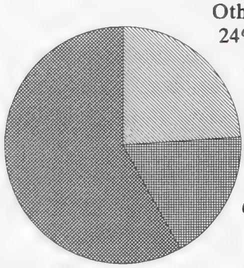
Business and professional services have a large knowledge component; well-educated and skilled individuals provide this expertise. The success of a country in exporting these services is a strong indication of how prepared it is to compete in the new knowledge-based economy.

National

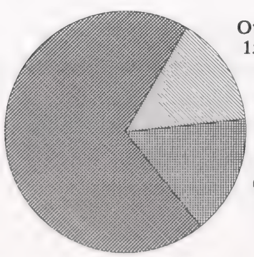
In Canada, the service industry is a vital part of the economy. Industry Canada estimates that it accounts for 40% of exports, 66% of GDP and 75% of employment.[4] The business services sector accounts for over 40% of Canada's service industry output.[5]

The impact of trade in the services industry is only starting to be understood. The value of Canada's services industry exports has more than doubled from $12.8 billion in 1983 to $26.8 billion in 1993.[6] In 1993, this was approximately one-sixth of Canada's total exports. Canada is one of the only OECD nations to experience a decrease in the value of service exports in relation to the value of merchandise trade. This brings into question the competitive strength of Canada's service industries and Canada's overall standing in the post-industrial, technology or knowledge-based economy.

Graph 1
Customers for Canadian Business Services
$9.2 Billion



Graph 2
Customers' Purchases of Business Services
$13.2 Billion



In 1993, Canadian companies, individuals and governments increased the value of service exports by 9%, Canada's highest recorded increase. Canadians also imported 8% more services, for a total of $40.7 billion. This created a 1993 services trade deficit of $13.8 billion. The largest deficits occurred in the tourism ($7.8 billion) and business services ($4.8 billion) sectors.[7] In the business services sector, Canada exported $10.2 billion in services and imported $15 billion.[8]

Alberta Position

From 1940 to 1991, employment in Alberta's services sector increased from 25% to 70% of the total workforce. The Business and Professional Services sector has grown faster than the industry as a whole and accounts for about 20% of service industry employment.[9]

As of September 1994, the Business and Professional Services sector accounted for 154,600 jobs in Alberta, representing 10.9% of Alberta's total workforce. This includes finance and insurance companies (40,500 employed), real estate and insurance agents (29,500 employed), and other business services companies (84,600 employed) as identified by Alberta Advanced Education and Career Development.[10] Employment in the Business and Professional Services sector increased by 18,700 employees in one year from September 1993 to September 1994.[11]

In 1992, the Business and Professional Services sector added $7.5 billion or 11.2% to Alberta's gross domestic product. The largest contributions were made by finance and real estate companies ($3.4 billion) and business services companies ($2.2 billion).[12]

Total Alberta Exports 1989 - 1993
(In Billions of Current Dollars)

	Goods	Services	Total
1989	13.1	1.5	14.6
% Total	89.7	10.3	100.0
1990	15.7	1.5	17.2
% Total	91.3	8.7	100.0
1991	16.1	1.7	17.7
% Total	90.4	9.6	100.0
1992	17.7	1.8	19.4
% Total	91.2	8.8	100.0
1993	19.7	1.9	21.6
% Total	91.2	8.8	100.0

Alberta's trade in services has shown a moderate growth rate. As is shown in the above table, trade in business services experienced a growth of 21% over five years, from $1.5 billion in 1989 to $1.9

billion in 1993. These figures are in real totals. The table also shows that services are a decreasing part of Alberta's trade with the rest of the world. As a portion of total trade, services decreased from 10.3% in 1989 to 8.8% of total trade in 1993.

Service industry exports from Alberta are currently only measured in two categories: tourism and transportation/business services. As indicated by the following table, there is no evidence to support a growth trend in service industry exports. When compared to the growth in employment and contribution to GDP from the services sector, the lack of export growth is difficult to explain. One possible explanation is that the growth in the services industries reflects Albertans providing services to other Albertans. Another explanation might be that Albertans are providing services to Alberta firms that export their goods, a form of indirect service exports.

Alberta Services Exports 1989 - 1993
(In Millions of Current Dollars)

	Tourism	Transport	Business Services	Total Services
1989	636	450	375	1,561
% Total	445.0	30.0	25.0	100.0
1990	587	489	444	1,520
% Total	38.0	32.0	29.0	100.0
1991	660	544	466	1,670
% Total	39.5	32.6	27.9	100.0
1992	620	1,140*		1,760
% Total	35.0	64.8		100.0
1993	771	1,119*		1,890
% Total	40.8	59.2		100.0

* includes transportation and business services
Source: Alberta International Trade Review 1989 - 1993

The Business and Professional Services sector in Alberta is not cohesive, but has a number of well established professional organizations. These represent the specific interests of their professional membership and are concerned with regulations, accreditation and professional standards. The Business and Professional Services Sector Team interviewed several representatives of the professional organizations as part of the business planning process.

This sector traditionally functions without any government assistance, but was very receptive and cooperative when talking to the representatives of sector team. The sector received the *Alberta International Export Strategy* as a positive initiative. While this sector is not trade-oriented, there is an awareness of changes in the way services are traded and that it is vital to be more internationally aware.

Priorities for Sector Development

Information from private sector representatives of the Business and Professional Services sector was used to develop this year's export strategy. Twelve interviews were conducted with leaders of industry associations who represent over 20,000 members. The information gathered in the interviews led to the identification of two priorities to develop growth and competitiveness in the sector.

The two development priorities are: to establish baseline data on the sector participants and their business activities; and to establish lines of communication within the sector, and between the sector and the federal and provincial governments.

Strategies

To act on the priorities identified by the private sector, the Business and Professional Services Sector Team will use two strategies: a data collection strategy and a communications strategy.

The **data collections strategy** will focus on direct mail surveys of businesses. The distribution and return of the Company Information Forms and the completion of the **1994 Alberta Services Export Survey** will supply the information required to form a database on the sector.

The Company Information Forms are standard survey questionnaires that will provide information to the sector team on the companies that make up the sector. They will be distributed with the assistance of the organizations contacted during the writing of this year's sector strategy. The forms ask for information on the name of the business, its

primary enterprise and it is currently exporting or is interested in learning about export opportunities.

The **1994 Alberta Services Export Survey** is the first effort made to track trade in all services to and from Alberta. A member of the sector team is on the steering committee for this project coordinated by Economic Development and Tourism to ensure the release of information to the private sector. Knowledge of trade flow is essential for helping businesses plan and set strategic objectives. This will also ensure that the *Alberta International Export Strategy 1996 - 1997* is more refined, and is based on reliable and current information.

The **communications strategy** has three approaches: asking businesses in the sector to attend events directed at their industries; seeking a commitment from government to keep businesses in the sector informed of activities and events; and asking companies in the sector to respond to the *Alberta International Export Strategy 1995-1996* and prepare for future sector business plans.

Communication among the associations and organizations that represent companies in this sector is essential to the development of domestic and export markets. By developing an identity beyond their business and organizational affiliations, companies in this sector can work together to deal with the issues of sector growth and competitiveness.

The communications strategy will focus on using government to open channels of communication between the members of the sector. This is an on-going process. It will begin by coordinating events in conjunction with **Industry Canada's "Services Month"** held in November 1995. Sector members will have the opportunity to meet and discuss topics of common interest.

Open lines of communication will be further developed to ensure that the sector stays well informed. Alberta Economic Development and Tourism's activities, including the results of surveys, export development workshops and other events, will be posted in organizational newsletters. This is the beginning of a communications network within the Business and Professional Services sector to increase awareness and prepare businesses for the future.

Measurement Criteria

In the Strategies section of this sector strategy, the sector team developed a simple plan to address the priorities identified by the private sector.

Data Collection Strategy

- build a list of companies in the sector by distributing and collecting as many of the Company Information Forms as possible.

- work on the **1994 Alberta Services Export Survey** and ensure this information is made available to the private sector.

Communications Strategy

- encourage and organize events in cooperation with **Industry Canada's "Services Month"** in November 1995

- use communication lines with contacts in the private sector to inform the private sector of government activities related to the sector

- encourage private sector participation in the *Alberta International Export Strategy* process and encourage companies to contact the team

Activities

The following section identifies specific activities such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

[1] Global Entrepreneurship, Industry Canada, quoted 21% of all world trade is in services November 1993.

[2] McRae, Dr. James J. an Exploratory Analysis of Canada's International Transactions in Services Commodities, Economic Council of Canada, Working Paper No. 27, 1992.

[3] McRae, Dr. James J. an Exploratory Analysis of Canada's International Transactions in Services Commodities, Economic Council of Canada, Working Paper No. 27, 1992.

[4] Industry Canada Sector Profiles, unpublished contact W.P. Molson or Margaret NcNabb at Industry Canada.

[5] Industry Canada Sector Profiles, unpublished contact W.P. Molson or Margaret NcNabb at Industry Canada.

[6] Canada's International Transaction in Services 1992 - 93, Table 1, Statistics Canada 67-203.

[7] Canada's International Transaction in Services 1992 - 93, Statistics Canada 67-203.

[8] Canada's International Transaction in Services, Statistics Canada 67-203, Table 1.

[9] Business Services: Their Role and Importance to the Alberta Economy, Nichols Applied Management, Alberta Economic Development and Tourism, November 1991.

[10] Alberta Advanced Education and Career Development, Labour Force Statistics, September 1994.

[11] Alberta Advanced Education and Career Development, Labour Force Statistics, September 1994.

[12] Statistics Canada, Provincial Gross Domestic product by Industry, Catalogue #15-203, October 1994.

ACTIVITY CALENDAR: Business and Professional Services

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
New England study-printing equipment & services	Print/Graphics	Apr-95	Year's project	Boston, MA	John Jacobson, Economic Development & Tourism (ED&T) - 427-1905
Incoming delegations	Several incoming delegations expected from Russia	Apr-95	Mar-96	Russia	Patricia Piironen, ED&T - 427-4809
National Association of Small Business International Trade Educators (NASBITE) Conference	Networking for Alberta providers of international trade training to meet others in the field from the U.S., Mexico, Middle East; identify potential export opportunities of education and training services.	09-Apr-95	12-Apr-95	Norfolk, VA	Audrey Albrecht-Lee, ED&T - 427-4323
NEBS - Professional Trainers	Export training for professional trainers interested in selling their services into the U.S.	Jun-95	Jun-95	Minneapolis, MN	Audrey Albrecht-Lee, ED&T - 427-4323
American Public Works Association	Government Procurement	Sep-95	Approx. date		John Jacobson, ED&T - 427-1905
Industry Canada Services Month '95	Variety of activities to be determined	Nov-95	Nov-95	Alberta	James Christianson, ED&T - 427-0897
Building and the Environment: Linking and Priortizing Environmental Criteria	Conference, Mission	Nov-95	Nov-95	Los Angeles, CA	Jim Armet, ED&T - 427-4809
World Markets At Your Doorstep, Trading House Conference	An export opportunity tradeshow to introduce Canadian companies to trading houses as cost-effective means of accessing the international marketplace	05-Dec-95	06-Dec-95	Calgary, AB	Drew Hutton, ED&T - 422-6236
The Canadian Invasion: Exhibition of High Design	Trade Mission, Trade Show	Mar-96	Mar-96	Los Angeles, CA	Jim Armet, ED&T - 427-4809
National Association of State Purchasing Officials (NASPO)	Government Procurement	24-Mar-96	28-Mar-96	Nashville, TN	John Jacobson, ED&T - 427-1905
Alberta Services Export Survey 1995	Survey of Alberta companies involved in providing services.	Summer 95	Summer 95	Alberta	Angela Muglenfeld, ED&T - 422-4322

Chemicals, Petrochemicals and Refined Petroleum Products

Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Chemicals, Petrochemicals and Refined Petroleum Products

* ***In terms of shipments, the petrochemical and refined petroleum products industries are two of the largest manufacturing industries in Alberta. In 1993, these industries accounted for approximately one-third of the value of the province's total manufacturing shipments.***

* ***The petrochemicals and refined petroleum products are highly capital-intensive industries, dominated by large national and multinational corporations.***

* ***The Alberta petrochemical industry is highly export-oriented. More than half of the value of production ($1.2 billion in 1993) was sold to markets outside Canada.***

* ***The refined petroleum products industry is primarily focused to supply the Western Canadian market. In 1993, only 7% of its sales were to markets outside Canada. This is mainly the result of the lower value-added nature of refined petroleum products compared to petrochemicals.***

Definition

Chemicals, petrochemicals and refined petroleum products include: petrochemicals and chemical fertilizers, industrial inorganic chemicals, organic and specialty chemicals, and refined petroleum products.

- Petrochemicals and chemical fertilizers include ethane-based ethylene and ethylene derivatives, methanol and methanol derivatives, and ammonia and ammonia fertilizers.

- Industrial inorganic chemicals include carbon black, chlorine, sodium chlorate, caustic soda, hydrogen peroxide, hydrogen sulphide, hydrochloric acid, carbon dioxide and sulphuric acid and are generally used directly or indirectly in industrial processes such as pulp and paper, mining, petroleum refining and fertilizers.

- Organic and specialty chemicals include paints and varnishes, soaps and cleaning compounds, rust inhibitors, catalysts and other specialty chemicals used in the oil and gas industry.

- Refined petroleum products include transportation fuels, heating oil, asphalt, petrochemical feedstock, kerosene, lubricants and other miscellaneous products.

International Overview

The chemical industry is a major global industry that accounts for a significant share of foreign direct investment and international trade. Major petrochemical markets include: the U.S., Western Europe, Asia and Latin America. The U.S. is the largest producer, consumer and exporter of petrochemicals. East Asia is the largest importer of petrochemicals.

Trade in chemicals is fiercely competitive, especially for commodity petrochemicals. While producers are active on a global scale, international prices are often dependent on U.S. prices. Most Asian countries import crude oil or naphtha for petrochemical production which places them at a cost disadvantage relative to countries with feedstock, especially those with ethane feedstock.

Competition is increasingly organized along geographic trading blocs: North America, Western Europe and Asia Pacific.

With respect to refined petroleum products, international trade is less significant, primarily due to the lower added value in petroleum products. For example, most trade between Canada and the U.S. occurs between adjacent border states and provinces.

Alberta Position

Alberta's chemical and chemical products industry is the province's third largest manufacturing industry. In 1993, it directly employed 9,200 people. In addition, chemicals and chemical products was Alberta's largest export sector in the manufacturing industry. In 1993, the sector accounted for $1.6 billion in exports or 27.7% of all manufacturing exports.

The chemical and chemicals product sector plays an important role in the long-term growth and prosperity of the province. Development of a strong base industry of first-stage petrochemicals over the next few years will form the basis for production of higher value-added products in the long-run.

In addition to attracting higher value-added production, a strong base industry will also attract the associated service and manufacturing industries to the province. This means that the chemical industry will continue to indirectly create jobs in the same way the oil and gas industry did in the 1970s. In summary, the continued expansion of the value-added chemicals sector will be a building block for economic growth.

With the economic recovery in North America, demand for chemicals is strong, inventories are low and industry profits are up. The large national and multinational chemical companies are currently assessing investment opportunities in new facilities or plant expansions. Alberta needs to encourage this investment.

Implementation of the NAFTA in 1994 and the Uruguay Round of Multilateral Trade Negotiations in 1995 will result in increased trade and investment opportunities for Alberta chemical producers. At the same time, it will also result in increased competition in the global marketplace.

Alberta's chemical and chemical products industry consists of three basic subsectors: petrochemicals and chemical fertilizers, industrial inorganic chemicals, and specialty chemicals.

Petrochemicals and Chemical Fertilizers

Alberta's natural gas-based petrochemical industry accounts for more than 85% of the total value of chemical production in the province. It represents over half of Canada's petrochemical capacity. The petrochemical industry is composed of three main segments:

- ethane-based industry (ethylene and ethylene derivatives);
- methanol and methanol derivatives; and
- ammonia and ammonia fertilizers.

Benzene is also produced in Alberta by Shell Canada (Scotford) from synthetic crude oil, and is used internally to manufacture styrene.

A number of elements characterize Alberta's petrochemical industry.

- The industry is export-oriented with 57% of its petrochemical and chemical fertilizer production shipped out of Canada. In 1993, 66% of Alberta's $1.2 billion in petrochemical exports were destined to the U.S., 32% to Asia.

- Alberta produces over 50% of Canada's ethylene, 80% of Canada's methanol and three-quarters of its ammonia.

- Alberta consumes about 25% of its total ammonia production, ships 25% to the rest of Canada and the remainder is exported to the U.S. Approximately $291 million of the upgraded products produced in Alberta (urea, anhydrous ammonia, ammonium nitrate, ammonium phosphate, etc.) are exported. Over 95% of these exports are to the U.S.

- Alberta-produced ethylene is primarily used within the province to manufacture a range of petrochemical derivative products including: polyethylene, ethylene glycol, vinyl acetate monomer and polyvinyl chloride. The derivatives are then largely exported. Alberta accounts for more than half of Canada's ethylene capacity.

- Methanol capacity in Alberta (Methanex in Medicine Hat and Celanese Canada in Edmonton) represents about three-quarters of Canada's total methanol capacity.

- There are 14 major petrochemical and chemical fertilizer producers in Alberta. With the exception of Novacor Chemicals, Cominco, Methanex Corporation and Sherritt Inc., the producers are typically Canadian subsidiaries of multinational corporations (Dow Chemical, ICI Canada, Union Carbide, Geon Company, Celanese Canada, etc.).

Industrial Inorganic Chemicals

The value of industrial inorganic chemical shipments amounted to $301 million in 1993, about 9% of the total value of Alberta chemical shipments. These commodity chemicals are generally used directly or indirectly in industrial processes in industries such as pulp and paper, mining (including oil and gas), petroleum refining and fertilizers.

The primary markets of this segment of the chemical industry are Alberta and Western Canada. Some inorganic chemicals are also sold to U.S. markets, accounting for approximately 10% of total Alberta production. Transportation costs are a major factor in limiting the market area for inorganic chemicals. Only a few Alberta producers are involved in servicing both domestic and export markets (e.g. Dow Chemicals).

Organic and Specialty Chemicals

The organic and specialty chemicals segment is the smallest product area, accounting for 5% of the total value of Alberta chemical production in 1992. Most of the Alberta specialty chemical companies are formulators or blenders of chemicals designed to supply specific markets in Alberta.

Refined Petroleum Products

In 1993, the refined petroleum products industry accounted for approximately 16% ($3.4 billion) of total Alberta manufacturing shipments. The industry is geared to serving the domestic market. The relatively low value-added nature of petroleum products such as gasoline and diesel fuel, combined with high transportation costs, limits export potential. International exports from Alberta, mainly to adjacent U.S. states, represented about 7% of industry shipments in 1993.

The industry is a mature industry that has been faced with a stagnant or declining market over the past 10 to 15 years.

The Alberta industry is composed of five refineries operated by ESSO Petroleum, Petro-Canada, Shell Canada, Husky Oil and Parkland Refining. With a throughput capacity of about 400,000 barrels/day, these refineries supply most of the Western Canadian market.

Strategic Directions and Priorities

The main objective for the chemicals and petrochemicals sector in Alberta is further expansion of the industry, creating new employment opportunities and contributing to economic growth. Upgrading increasing volumes of Alberta resources continues to be a priority.

It is important that the chemicals and petrochemicals industry provide increased opportunities to Alberta companies to supply goods and services to it, permitting these sectors of the Alberta economy to also expand.

In addition to expanding exports, the industry should be providing valuable materials which can be used by the plastics industry and other manufacturers in the province.

Objectives

In the petrochemical industry, most of the companies are large national or multinational companies with their own marketing strategies. Similarly, in the refined petroleum products industry, most businesses are large integrated companies which have their own retail market outlets for their products.

The Alberta objectives and priorities for the petrochemical industry are to attract new investment to the Alberta industry and ensure that the industry remains internationally competitive.

Investment opportunities have been identified and will be promoted. This includes oxygenated fuel additives, higher olefins, additional production of ethylene, ethylene derivatives, propylene and derivatives for local plastic producing and export.

Strategic Direction

The Alberta government is committed to the long-term sustainability and growth of the chemical industry in the province. As such, it is important that Alberta maintains a competitive environment to encourage the expansion of the chemical industry. This includes the following:

- Maintain a competitive tax environment, including the amendment or replacement of the Machinery and Equipment tax.
- Maintain sufficient quantities of competitively priced feedstock.
- Explain the Alberta Advantage to key individuals in the global petrochemical industry including feedstock pricing, ethane supply and transportation costs.
- Participate in key trade shows, conferences and international petrochemical events including offering Alberta programs and information seminars with presentations on the Alberta Advantage, keynote speakers from the Alberta industry and government.
- Visit international petrochemical companies which express an interest in Alberta to encourage them to seriously consider investing in Alberta in 1995/96.

The decision makers in the multinational chemical companies reside outside the province, and generally, outside of Canada. A strategy should be developed on how best to work with these companies to meet Alberta's objectives for this industry.

Alberta Ministers and officials should meet with CEOs of national and multinational chemical companies to encourage them to invest in the Alberta economy. A communications strategy will be developed to explain the new direction of the government supporting a strong market-driven economy, its commitment to fiscal responsibility and the changes to the Alberta economy.

Measurement Criteria

The Alberta chemical industry is a mature industry which does not require the soft export and industry development assistance programs that developing industries require. Therefore, the best measurement for this industry is that private sector investment is made in one to one-and-a-half new chemical plants or plant expansions every two years.

Activities

Activities in this sector are directed toward creating and maintaining a business climate which is conducive to the success and prosperity of the Alberta industry. Reinvestment and expansion by the industry is encouraged and promoted. Attracting new industry participants and investment from outside the province is an important function in this capital-intensive sector. On an ongoing basis, sector officers consult with Alberta chemical industry firms to identify important policy or regulatory issues which impact on their competitiveness and ability to expand and reinvest. Sector officers brief and advise department management and elected

officials and, when appropriate, advocate change or reform on behalf of industry.

In addition to meeting with companies both inside and outside the province to learn of their plans and concerns and to promote investment in Alberta, industry officers attend and participate in selected industry events both to increase knowledge and expertise regarding the industry and to disseminate information about Alberta and promote investment opportunities in the province.

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

TABLE 1
Economic Indicators
Chemical Products Industries

		1989	1990	1991	1992	1993
Employment this sector		6,900	7,500	7,900	7,900	9,200
	% of Alberta employment	0.57	0.61	0.63	0.64	0.73
	% of Alberta manufacturing employment	7.1	8.0	8.5	8.6	9.6
Average weekly earnings ($)		792	852	929	894	1,155
Shipments	Alberta ($ millions)	3,479.6	3,310.9	3,250.2	3,025.1	3,220.8
	Canada ($ millions)	23,670.1	23,046.4	22,185.9		
	Alberta's as a % of Canada's	14.7	14.4	145		
Exports	Alberta ($ millions)	1,569.4	1,467.2	1,489.7	1,539.1	1,606.4
	Canada ($ millions)	5,772.0	6,095.6	6,047.3	6,786.9	5,728.5
	Alberta's as a % of Canada's	27.2	24.1	24.6	22.6	28.0
Capacity utilization (national figures)		91.7	87.9	82.4		

TABLE 2
Refined Petroleum Products Industries

		1989	1990	1991	1992	1993
Employment this sector		10,400	7,300	4,100	2,000	
	% of Alberta employment	0.85	0.59	0.32	0.16	
	% of Alberta manufacturing employment	10.7	7.7	4.4	2.2	
Average weekly earnings ($)		958	1026	992		
Shipments	Alberta ($ millions)	3,089.2	3,627.8	3,394.9	3,300.0	3,382.7
	Canada ($ millions)	14,958.7	17,040.2	16,856.7		
	Alberta's as a % of Canada's	20.7	21.3	19.8		
Exports	Alberta ($ millions)	98.4	171.1	133.8	191.3	231.7
	Canada ($ millions)				2,209.0	2,508.3
	Alberta's as a % of Canada's				8.7	9.2

TABLE 3
Alberta Chemical and Chemical Products Shipments, 1993

	$ Million
Petrochemicals	1,428.5
Agricultural Chemicals (including fertilizers)	743.3
Industrial Inorganic Chemicals	301.5
Specialty Chemicals:	
Paints and varnishes	10.8
Soaps and cleaning compounds	20.3
Printing inks	6.3
Other chemicals[1]	710.1
Total	3,220.8

[1] Includes pharmaceutical and medicine industry shipments

TABLE 4
Export Commodities 1993
Chemicals Industries

Tariff #	Commodity Description	Alberta Exports $ Millions	% of Total Industry Export	Canadian Exports $ Millions	% of Total Industry Exports
390110	Polyethylene, specific gravity <0.94	344	21.4	519.7	6.8
290919	Acyclic ethers nes	203.5	12.7	232.8	3.1
310210	Urea, packages >10 kg	160.6	10.0	285.8	3.7
290531	Ethylene glycol	148.7	9.3	186.3	2.4
290511	Methanol	139.7	8.7	196.4	2.6
290250	Styrene	123.4	7.7	318.9	4.2
281410	Anhydrous ammonia	82.8	5.1	168.8	2.2
390120	Polyethylene, specific gravity >0.94	60.0	3.7	295.4	3.9
390130	Ethylene-vinyl acetates copolymers	41.6	2.6	46.8	0.6
280300	Carbon (carbon blacks)	27.1	1.7	69.0	0.9
310221	Ammonium sulphate, packages >10 kg	23.9	1.5	34.7	0.5
310230	Ammonium nitrate, packages >10 kg	23.1	1.4	57.2	0.8
291532	Vinyl acetate	20.8	1.3	20.9	0.3
282911	Sodium chlorate	15.9	1.0	166.4	2.2
291010	Oxirane (ethylene oxide)	15.2	0.9	28.4	0.4
290315	Ethylene dichloride	14.3	0.9	81.2	1.1
290941	Diethylene glycol	12.8	0.8	13.8	0.2
391211	Cellulose acetates, non-plastic	12.5	0.8	12.5	0.2
290321	Vinyl chloride (chloroethylene)	10.7	0.7	10.7	0.1
291521	Acetic anhydride	8.7	0.5	8.7	0.1
Total	Top 20 chemicals	1,488.7	92.7	2,754.5	36.1
Grand Total	**All Chemicals**	**1,606.4**	**100.0**	**7,624.9**	**100.0**

ACTIVITY CALENDAR: Chemicals, Petrochemicals and Refined Petroleum Products

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Canadian Advanced Technology Assoc. Conference (CATA)	Incoming Ministerial Mission from Taiwan	May-95	May-95	Calgary, AB	Jay Tam, Economic Development & Tourism (ED&T) - 427-4809
CTBA Annual Meeting	Canada Taiwan Business Assoc. Meeting	Jun-95	Jun-95	New Brunswick	Jay Tam, ED&T - 427-4809
Malaysian Oil, Gas & Petrochemical Engineering Exhibition (MOGPEE)	Outgoing Mission of Alberta Companies	11-Jul-95	14-Jul-95	Kuala Lumpur, Malaysia	Rabin Mendis, ED&T - 427-4809
Annual Sales & Marketing Mission	Outgoing Trade Mission to Taiwan	Sep-95	Sep-95	Taiwan	Jay Tam, ED&T - 427-4809
World Trade'95 (Canadian International Trade Assoc.)	General	19-Oct-95		Toronto, IL	John Jacobson, ED&T - 427-1905
Kaohsiung Trade & Investment Mission	Incoming Mission from Taiwan	Nov-95	Nov-95	Alberta	Jay Tam, ED&T - 427-4809
Dewitt Petrochemical Review	Industry Review Seminar; company visits in area	Mar-96	Mar-96	Houston, TX	Ed Condrotte, ED&T - 427-2005
Chemical Management Associates Inc. Annual meeting	Industry Review Seminar; company visits in area	Mar-96	Mar-96	Houston, TX	Chrys Dmytruk, ED&T - 427-2005
National Petroleum Refiners Association Petrochemicals meeting	Industry Review Seminar and Investment Development Opportunities; company visits in area	Mar-96	Mar-96	San Antonio, TX	Chrys Dmytruk, ED&T - 427-2005
Canadian Chemicals Producers Association Annual meeting.	Canadian Industry Networking Meeting and Investment Prospects	Jun-96	Jun-96	Unknown	Chrys Dmytruk/Ed Condrotte, ED&T - 427-2005
Participation in the Canadian Energy Research Institute.	Review of Natural Gas Resources	Ongoing		Calgary, AB	Ed Condrotte, ED&T - 427-2005
European Petrochemical Association (EPCA) & Society of Chemical Industries (SCI) annual meetings	Industry Meetings and Investment Development Opportunities	Sept/Oct 95		Europe	Chrys Dmytruk, ED&T - 427-2005
Incoming Petrochemicals Mission	5 Incoming Delegations	Unknown	Unknown	Alberta	Josephine Choi, ED&T - 427-4809

Consumer Products

Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Consumer Products

* ***The consumer products sector makes up one of the largest components in the world trade in goods, totalling hundreds of billions of dollars annually.***

* ***Alberta's strengths in consumer products include the production of a good quality product, the ability to customize the product to meet consumer demand, innovative design skills, and a skilled labour force.***

* ***Alberta's priority markets for this sector are Alberta, Other Canada and the U.S.***

Definition

The Consumer Products sector makes up one of the largest components in the world trade in goods. It consists of products destined for the end user.

The following subsectors, although not an exhaustive list, appear to have the greatest potential in Alberta.

- Furniture
- Clothing, Textiles, and Sewn Products including Leather Goods and Footwear
- Hardware and Home Improvement Products
- Giftware and Crafts
- Sporting and Recreational Goods

Overview

The consumer products sector makes up one of the largest components in the world trade in goods. Totalling hundreds of billions of dollars annually, this sector is growing steadily. For such products as apparel and textiles, bicycles and other sporting goods, the fastest growth has been in developing or state-managed economies, which export to the developed world. In other areas, such as furniture, growth is highest between major developed countries, and trade blocs, such as Western Europe and North America. Newly industrialized and developing countries are expected to continue to increase their share of world trade, both in labour-intensive industries, such as apparel, and in capital-intensive, standard technology, mass production industries such as bicycles.

Because of population growth, developing countries are expected to gradually increase their share of consumption of consumer goods. In developed countries, the demand for consumer goods will have the fastest growth in high quality, fashionable and functionally designed products, which can be purchased and serviced conveniently. Retailers and manufacturers will have to work together in the long term to improve quality and merchandising.

Trade within regional trade blocs is expected to increase faster than trade between these blocs or between developing and developed countries. Canada's main export focus in the consumer products sector will be on other developed countries, particularly the United States, over the next five to 10 years.

Several trends will affect the international marketplace for consumer products. Increased global competition will mean that manufacturers must produce their goods more efficiently and market them more effectively. The result will be more niche-oriented marketing or specialization in production.

An aging population in developed countries will affect the type of goods in demand. Products which are convenient to use and make life easier will be in demand. Products which are sensitive to the environment are also gaining in popularity and this trend should continue.

In general, Alberta's strengths in consumer products include the production of a good quality product, the ability to customize the product to meet consumer demand, innovative design skills, and a skilled labour force.

Alberta's competitive disadvantages include the current level of management and marketing

capabilities of most companies to compete internationally, increased global competition, and high labour costs.

The Alberta industry is fragmented and diverse, making it difficult to measure its size and activity. New methods to monitor this industry need to be developed to improve understanding of the industry and to encourage a more proactive approach.

Furniture

Definition

Includes household furniture, office furniture, institutional furniture, and bedding.

International Overview

The five largest furniture importing countries are Germany, the U.S., France, the Netherlands and the U.K. The U.S. will remain Canada's largest trading partner due to its proximity and common characteristics of furniture product design, quality and standards. Increased competition may be expected from Asian countries which, with modern technology, could produce any type of product from the low- to high-end categories. With the implementation of North American Free Trade Agreement (NAFTA), opportunities will exist for producers of high-end specialty products that could not compete directly with Mexican low-cost products.

Taiwan is America's and Canada's largest competitor. Other Asian countries developing efficient furniture manufacturing industries for the purpose of exporting include the Philippines, Malaysia and Indonesia. China, with its abundant, low-wage labour force, is becoming a more active player on the international scene. These imports from Asia provide particularly strong competition in metal, wood living room and outdoor furniture.

Canadian Situation

Canada's furniture industry is concentrated in Ontario and Quebec which account for 85% of employment and shipments. Approximately 14% of Canada's furniture shipments are from Western Canada.

The FTA (Canada/U.S. Free Trade Agreement) has significantly increased competition from U.S. manufacturers in the Canadian market because of tariff elimination. As a result, it is harder for Canadian manufacturers to maintain their share of the domestic market. They will now have to expand their export markets. Although the current exchange rate has been favourable to Canadian producers, they still need to pursue efforts to improve their productivity and competitiveness by implementing more efficient manufacturing methods, focusing on product specialization, designing new products, developing new markets, improving marketing/promotion strategies and considering strategic alliances/joint ventures at the domestic and international level.

Alberta Position

There are approximately 350 firms in Alberta manufacturing furniture. Most of these firms are small with 80% employing less than 50 people. These firms shipped $229.5 million in household and business/institutional furniture in 1993. This is a 1.1% decrease from $231.9 million in 1992. Alberta's international exports of household and business/institutional furniture were valued at $63 million in 1993.

Market Opportunities

In the past, labour rates, access to raw materials, tariff rates and transportation costs were critical to the competitiveness of furniture products in the marketplace. In the future, comparative advantage will be based more upon marketing genius, integration and design. It will be more important than ever before to produce high-value products at the lowest cost.

Transportation costs, the supply of raw materials and increasing global competition are all constraints for the industry.

To remain competitive, Canadian manufacturers will have to pursue productivity gains available through the use of new technologies and advanced manufacturing systems. The increased use of new technologies, together with more emphasis on the development of export markets, is likely to allow medium-sized firms to offer a narrower product line to a broader market base. Design, market research and promotion will be very important to their success in international markets. The development of export-oriented management would also allow firms to make long-term financial and product development commitments. Specialization or niche marketing will be key to survival for much of the industry.

Because of transportation costs, the growth in the popularity of ready-to-assemble furniture is expected to continue and new products will be introduced to accommodate the home office and the home entertainment centre which are becoming more popular. Recently, increased attention has been given to designing products that satisfy the needs of both the aging and disabled populations. Juvenile furniture and motion furniture are also growing segments.

The residential furniture market is greatly dependent on regional and consumer preferences in style, design, size and quality.

Selling price, customization, quality, design and short delivery times can all contribute to an advantage for Canadian producers.

Customized furniture, unique design and "Made in Canada" products are all advantages for Alberta manufacturers. Niche markets exist in ready-to assemble kits and for companies manufacturing a high quality product or unique design.

Canadian exports to Japan increased from $1.5 million to $6.5 million between 1992 and 1993. This increase is largely due to increased Japanese interest in American products, the low value of the Canadian dollar and the high cost of manufacturing in Japan. The Japanese market may offer some opportunities for a limited number of Canadian wood specialty furniture manufacturers. Canadian manufacturers will need to make the necessary adjustments in design and size required for the Japanese and Asian Markets.

Clothing, Textiles and Sewn Products

Definition

Includes, but is not limited to, men's and ladies fashions, sportswear, children's wear, fleecewear, protective clothing, workwear and corporate wear.

International Overview

In the 1990s, two trends in particular will change the industry: globalization and consolidation. Globalization means free trade with the U.S. and Mexico. Consolidation means continuing growth of mass merchants, shifts in the retail distribution channels, and apparel and retail consolidation. Those clothing manufacturers that prosper in the 1990s will have four characteristics in common:

- Appropriate marketing strategies
- World-class manufacturing
- Flexibility and speed
- Information as a competitive business tool.

Alberta Position

Clothing manufacturers in Canada and Alberta have traditionally served small domestic markets. To overcome cost disadvantages, Alberta clothing manufactures tailor their merchandise to compete in market segments that place less emphasis on price and more emphasis on fashion, quality, fit and construction. Because Alberta producers serve small domestic markets, they are flexible and adept at handling small runs of multiple styles and colors. This capacity positions domestic manufacturers ideally to serve upscale, high fashion markets, where production scale disadvantages are offset by a quick response to high fashion trends. As a result, independent and specialty clothing stores offer good sales opportunities for domestic manufacturers, as they differentiate themselves by offering unique merchandise assortments to customers who look for fashion and quality before price.

There are approximately 175 clothing manufacturers in Alberta employing over 3,000 workers, making apparel manufacturing the province's second largest consumer products industry after furniture. Manufacturing revenues are approximately $161 million including international exports. Except for a few large firms, most clothing manufacturers in Alberta are small businesses with less than 20 employees. The Alberta clothing industry focuses on producing industrial uniforms, corporate wear, outerwear/ skiwear, children's wear, and high fashion products for domestic and export markets.

In 1993, shipments of clothing by Alberta manufacturers grew by 16.1% to reach $161 million.

Alberta manufacturers have focused primarily on selling to local independently operated clothing stores.

Market Opportunities

A 1990 study of the Alberta apparel industry identified the three best product market opportunities for Alberta firms as:

- Domestic and export contract manufacturing
- Domestic niche markets
- High fashion exports.

Opportunities in contract manufacturing include private labels for Canadian and U.S. specialty stores and department stores, mid-to-high priced goods for Alberta designers, and mid-to-high priced garments for Far East Asian firms. Potential domestic niches include active sportswear, children's wear, custom fleecewear, women's specialties (plus-size women's apparel and maternity clothes), protective clothing, workwear and corporate wear. In high-fashion, potential export markets include specialty stores and regional department stores located along the U.S. west coast, in the mountain region and in the mid-west.

Hardware and Home Improvements

Definition

The hardware and housewares industry manufactures a broad range of products, such as cookware, small household appliances and other durables, automotive accessories, kitchen and bath products, flooring, electrical and lighting products, home security products, locks and latch sets, cabinet and casket hardware fittings, hinges, and other builders' and shelving hardware. The industry also manufactures a variety of hand tools and implements, such as augers, axes, chisels, edge tools, garden implements, hammers, handsaws, mechanics' measuring tools, screwdrivers, and wrenches.

International Overview

Global consumer expenditures in this sector have been stagnant during the past few years. This has resulted in pent-up demand, particularly in the dominant U.S. market. This has heavily impacted the Canadian industry due to its heavy reliance on the U.S. market. As consumer confidence and the market for new homes improve, spending on household durables should increase.

Canadian Situation

Companies having 20 employees or less dominate Canada's hardware and housewares manufacturing sector, employing approximately 22,000 people. A small number of larger firms are responsible for most of the industry's sales.

Canada is a net importer of hardware and houseware products and has been dependent on the U.S. Offshore countries such as Taiwan and the Far East are increasing their share of exports to Canada. This is primarily due to the lower material and labour costs in these countries. To remain competitive, Canadian manufacturers have begun to specialize and carve out niche markets for their products. Canadian firms' competitive edge is the quality and innovation of their products.

Alberta Position

Alberta's international exports of hardware and home improvement products were valued at approximately $12.5 million in 1993. Products exported included wood polishes, scouring preparations, gaskets, rubber products, tires, bags, baskets, stoppers, lids, containers, hosepiping, wallcoverings, floor coverings and tarpaulins. There were over 800 Alberta companies producing these products.

Market Opportunities

Some promising areas for international exports are lawn and garden equipment, tableware, plastic housewares, small appliances, cookware, microwave ovens, the do-it-yourself markets, patio garden ornaments, and tools. Innovative and environment-related niche products, such as composters, also offer excellent opportunities for Canadian producers.

Niche markets in Japan are for do-it-yourself products; in Mexico, for hand and power tools; and in Europe, for small jacuzzis and drywall tools.

Giftware and Crafts

Definition

Giftware and crafts include a variety of items such as knick knacks, sports souvenirs, kitchen gadgets, jewelry, jewelry boxes, flower arrangements, cards, souvenirs, decorations and collectibles. Collectibles include brass animals, ceramic dolls, porcelain figurines, heritage house reproductions, plush toys, pottery, and china. Crafts include unique items which can be manufactured in sufficient quantity for export.

Canadian Situation

Niche markets for giftware and crafts vary by geographic market and are closely tied to a country's or region's culture. For example, in upstate New York, western Pennsylvania and West Virginia, giftware and crafts with a 'country' or 'traditional' theme remain popular. Items that carry a theme or are part of a collection are also popular. Most gift purchases are made in retail specialty stores where each store tends to create a theme or flavour. When deciding what to purchase, consumers generally first choose a general material such as brass, crystal, or wood, and then choose a theme such as figurines, dolls, cats, boats, etc. Quality, not price, seems to be the main criterion for consumers in purchasing giftware and crafts. Value for the dollar spent is important.

Giftware and crafts are considered luxury or non-necessity items and, as a result, the recession negatively affected gift sales. Canadian products should become more popular since duty rates were reduced as a result of the FTA and should be eliminated under NAFTA.

Canada's strengths include quality and compatibility with U.S. tastes. Products identified as being made in Canada sell well in the U.S.

Alberta Position

The Alberta Craft Council estimates there are 8,000 giftware and craft producers in Alberta. This sector generates approximately $80 million in gross sales with total net returns of almost $45 million. This sector consists primarily of small producers with over 50% of giftware and craft producers reported as working from their home or office.

The Alberta Craft Council has been providing programs to assist in the development of this sector since 1980. Producers say they need assistance in marketing their product, as well as information on where to sell their product and how to run a small business. The Alberta Craft Council, through the Alberta Heritage Craft Project, will be providing this service to Alberta producers.

Market Opportunities

Promising areas for international exports include the U.S. and Japan. Both "large quantities" and one-of-a-kind objects are in demand. Because the market is so competitive, particularly on an international level, quality and uniqueness of

Alberta products are essential to their success. Specialization, or niche marketing, will be key to the expansion of the industry.

Sporting and Recreational Goods

Definition

Includes sporting goods, recreational goods such as boats, tents, camping gear, toys, and games. Sporting goods can be segmented into summer (baseball, football, golf, fishing, cycling, and pools), winter (skates, hockey gear, snowshoes, snowboards, and skis) and all-season (fitness, gym and play structures) products. In general, the toy industry comprises four broad categories: dolls and stuffed toys; puzzle play toys; board, skill/action, and video games; and children's vehicles-tricycles, scooters, small bicycles.

International Situation

The world market for sporting goods is estimated at about $70 billion. Although exact worldwide market figures are unavailable, industry estimates place the U.S. at 30% of the sporting goods market, EC at about 33%, Japan at 22%, and Canada at 3%.

The international outlook for sporting goods, will be bright, although sales may not achieve the growth levels of the 1980s. The rise in many countries' income levels, along with an increasing interest in pursuing leisure-time activities while maintaining an active and healthy lifestyle, will reinforce this growth.

Sourcing opportunities will expand as more countries become skilled in the use of composites and advanced materials. These will continue to supplant more traditional materials and gain ready acceptance among consumers. The industry will increase the use of recycled and recyclable materials in the manufacturing process and place greater emphasis on the development and marketing of environmentally friendly products.

The more successful firms will have marketing rather than just manufacturing operations, with control over the brand name, distribution, service, and manufactured quality of their products.

The industry will be required to reduce product development lead time, while there will be pressure from major retailers to shorten the product buying cycle.

The demand for toys and games is dependent on the level of disposable income, the number of children 15 years and younger, and seasonal demand. Baby boomers are having children later in life. Two-thirds of annual toy sales occur between October and December. The world toy industry is dominated by a few multinationals.

Canadian Situation

Canadian companies generally have a reputation for high quality, well-engineered and well-designed products and are strong international performers in certain segments of world markets. The Canadian industry is known, on a global basis, primarily for its strength in skating and hockey equipment, cycling, exercise equipment, and personal watercraft segments.

Consumer demand for brand name products is an important factor affecting the industry's ability to compete. Alberta and Canadian companies (small to medium size) have had difficulty in making their names widely known. Sporting goods manufacturing tends to be labour intensive, making it vulnerable to competition from newly industrialized countries and less developed countries. Canada experiences a cost disadvantage relative to manufacturing operations in low-wage countries.

Alberta Position

Alberta shipments of toys, games, sports equipment, recreational vehicles, boats, tents and camping gear, were in excess of $20 million in 1993. Presently, about 50 Alberta companies manufacture in the sport and recreation market.

The economic slow down in Canada has had a negative effect on Alberta exports to other provinces.

There are presently 44 Alberta companies engaged in niche sporting goods markets, specifically outdoor games, swimming, video games, gymnastics, golf, fishing, and snow skiing.

Most Alberta firms are small, niche-oriented operations that are privately owned and are constrained by limited size and financial resources. Typically, smaller operations have limited management, administration and marketing resources, which will inhibit growth.

Market Opportunities

Brand names continue to dominate in the sale of medium- to high-end products. With the exception of Alpine ski manufacturing, suppliers tend to source products from countries or regions where the transaction will be to their benefit.

Key emerging trends in North America and Western Europe are:

- The continuing emphasis on personal fitness and family or group recreational activities, which is expected to sustain the growth and popularity of these activities at the expense of competitive individual and team sports.
- Increased female participation, helping to expand overall participation in many recreational and sporting activities and to popularize newer ones, thereby increasing demand for both new and existing equipment.
- Greater awareness by users of outdoor and recreational products of the effects these products and resulting activities will have ecologically and environmentally. More manufacturers are considering these issues in their product development and marketing plans.
- Anticipation of significant growth in individual outdoor-oriented activities and slower growth in team and indoor activities. Some targeted growth areas the next decade are products associated with cycling, soccer, exercise walking, basketball, in-line skating, volleyball, exercising with equipment, wilderness activities, and personal watercraft use.

Priority Markets

- Alberta
- Other Canadian Provinces
- U.S.

Strategic Direction and Objectives

Objective

To maximize the benefits to the Alberta economy of consumer product opportunities including a focus on international marketing opportunities.

Strategic Directions

- Establish an ongoing process to review the global market for consumer products and its subsectors to enable identification and dissemination of market opportunities.
- Assist companies to develop business skills, marketing, promotion and export readiness.
- Facilitate business relationships between producers and suppliers and producers and wholesalers (i.e. trade shows, trade missions, incoming buyers programs, etc.).
- Assist companies to identify new market opportunities, including international markets.
- Develop an inventory of Alberta companies and producers, what quality and quantity of products they have to offer, including size of companies, current markets and Alberta's strengths (i.e. need for research and development).

Develop awareness of consumer products in the foreign offices (i.e. training of foreign office staff, establishment of displays).

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Consumer Products

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
New Exporters To Border States Mission	Furniture	Apr-95	Apr-95	Boston, MA	Matt Collins, Economic Development & Tourism (ED&T) - 427-1905
International Home Furnishing Market	Home furnishing industry's introductory wholesale market (68,000 visitors, 7 million sq ft.)	27-Apr-95	05-May-95	High Point, NC	Horst Ramanauskas, ED&T - 422-7011
Giftware Rep Locator	Mission; giftware manufacturers opportunity to identify potential reps or agents for the Minnesota/Mid West region of the U.S.	Jun-95	Jun-95	Minneapolis, MN	Carol Sullivan, ED&T - 427-4323
Department of National Defence Clothing Proposal	Department of National Defence's privatization of clothing purchasing (Alberta consortia bid)	Jun-95	Jun-95	TBA	Lori Schmidt, ED&T - 427-2005
Apparel NEBS	Export training; apparel manufacturers interested in U.S.	13-Jun-95	14-Jun-95	Seattle, WA	Carol Sullivan, ED&T - 427-4323
International Furniture Fair	Leading European furniture show-145,000 visitors	16-Jun-95	21-Jun-95	Cologne, Germany	Horst Ramanauskas, ED&T - 422-7011
Montreal Furniture Market	Annual furniture show introducing new furniture designers	17-Jun-95	20-Jun-95	Montreal, PQ	Horst Ramanauskas, ED&T - 422-7011
NEBS - Giftware	Export training; giftware manufacturers interested in U.S.	Aug-95	Aug-95	Seattle, WA	Carol Sullivan, ED&T - 427-4323
50th National Institute of Governmental Purchasing Exposition	Annual professional development forum and product exposition (buyers show)	05-Aug-95	09-Aug-95	Denver, CO	Lori Schmidt, ED&T - 427-2005

ACTIVITY CALENDAR: Consumer Products					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Calgary Furniture Show	Annual furniture show for Western Canadian producers	24-Aug-95	27-Aug-95	Calgary, AB	Horst Ramanauskas, ED&T - 422-7011
Aboriginal Crafts Export Vision Across Canada	Wholesalers, distributors and producers of native arts and crafts; learn about marketing into the U.S.	Sep-95	Sep-95	TBA	Carol Sullivan, ED&T - 427-4323
Edmonton Garment Manufacturing Centre	Establishment of core manufacturing tenants and a contract sewing group	Sep-95	Sep-95	Edmonton, AB	Lori Schmidt, ED&T - 427-2005
3rd Annual Alberta "Threads Festival"	In-coming buyer's reception	Sep-95	Sep-95	Edmonton, AB Calgary, AB	Lori Schmidt, ED&T - 427-2005
1995 Bobbin Show	Annual technology and sourcing show for the apparel industry; Manufacturing Expertise/Technology Awareness Program	12-Sep-95	15-Sep-95	Atlanta, GA	Lori Schmidt, ED&T - 427-2005
ORGATEC	Bi-annual office furniture show and accessories; 170,000 visitors worldwide	10-Oct-95	25-Oct-95	Cologne, Germany	Horst Ramanauskas, ED&T - 422-7011
International Interior Design Expo (IIDEX)	Furniture	16-Nov-95	18-Nov-95	Toronto, ON	Matt Collins, ED&T - 427-1905
World Markets At Your Doorstep, Trading House Conference	Export opportunity tradeshow; introduce Canadian companies to trading houses as cost effective means of accessing international markets	05-Dec-95	06-Dec-95	Calgary, AB	Drew Hutton, ED&T - 422-6236
Toronto Furniture Market	Annual furniture show introducing new furniture designers	14-Jan-96	17-Jan-96	Toronto, ON	Horst Ramanauskas, ED&T - 422-7011
NEBS - Giftware	Export training; giftware manufacturers wanting to sell to the U.S.	Feb-96	Feb-96	Minneapolis, MN	Carol Sullivan, ED&T - 427-4323
Magic Show/Ladies Wear Show	Annual buyers show	Feb-96	Feb-96	Las Vegas, NV	Lori Schmidt, ED&T - 427-2005

Education and Training

Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Education and Training

* ***The exports of education and training services and products have recently become an important component of Alberta's export mix. The size of this newly defined sector will be determined when proper statistical information is obtained.***

* ***As the necessary infrastructure develops this sector has the potential to become a major industry for the province.***

* ***There are many countries with a need for education and training that have the financial resources to pay directly for these services and products.***

* ***As international aid agencies are increasingly stressing the importance of education and training in developing countries, new opportunities are generated for Alberta's public and private sector organizations in this field.***

* ***It is necessary for Alberta's education and training organizations, both public and private, to coordinate their export efforts and to work effectively with each other to cultivate these opportunities.***

* ***It is necessary to increase the provision of education and training to Alberta business firms in all sectors to ensure that they have the skills to effectively enter export markets in various global regions.***

* ***The sale of Alberta products and services often generates opportunities to sell education and training services and vice versa.***

* ***An interdepartmental commitment is required to provide adequate resources to ensure the successful implementation of this plan.***

Note: Please refer to pages 5 and 6 for a summary of objectives, strategies and activities.

Sector Objectives

- To increase the revenue from the sale of education and training goods and services to the global marketplace.

- To assist Albertans in becoming more globally aware and more successful world traders.

Definition

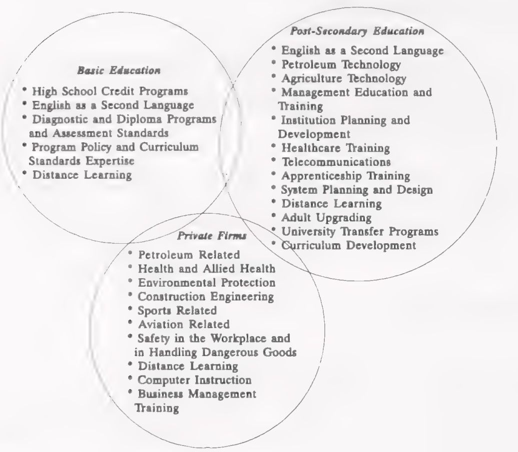
The education and training sector, as referred to in this document, consists of organizations engaged in the delivery of education and training services and products on a fee or contract basis. These services and products are delivered by private companies and by education and training institutions.

This sector includes the design, production and delivery of education and training programs and materials across a wide range of subjects. Academic and training courses are delivered in the classroom (either in Alberta or in the contracting country) and in the workplace. In addition, this sector offers consulting services, the evaluation of training programs and the development of educational software/courseware. Training services are characterized by their emphasis on the provision of human resource development programs, job-related training, and skills upgrading, primarily for business, industry and public service clients. Education programs provide opportunities for individual secondary and post-secondary students to obtain Alberta credentials.

Training for exporters and potential exporters is recognized as requiring special attention.

Subsectors

The following diagram represents areas where Alberta education and training services have developed a competitive degree of expertise and are concentrating their international marketing efforts.



Market Description

Alberta's education and training industry began to grow in the late 1960s. Overseas opportunities, supported by the Canadian International Development Agency (CIDA), assisted Alberta public and private institutions in becoming involved in international development and technical cooperation. In 1990 and 1991, CIDA disbursed a total of $375 million on education and training. It is estimated that the World Bank has cumulative lending commitments of $6 billion for education and training.

International competition for education and training contracts is strong. Great Britain, the United States, France, Japan and Australia have all adopted aggressive, coordinated approaches that have resulted in their capturing significant parts of the international market. Australia's coordinated approach has resulted in spectacular growth in foreign sales of education and training services.

Alberta's education and training services are highly regarded internationally. Programs developed by the Alberta Tourism Education Council, for example, are receiving worldwide recognition and awards. With more aggressive marketing, Alberta can expect stronger demand for its services to meet the human resource and institutional development objectives of these countries. To enhance and expand Alberta's successes in international markets, it is necessary to increase and improve the provision of global awareness programs and activities for Albertans.

Markets with the greatest potential appear to be as follows:

Asia	Americas	Middle East
Japan	Mexico	Kuwait
Pakistan	Canada	United Arab Emirates
Korea	United States	Saudi Arabia
Indonesia		Lebanon
India		
China		
Taiwan		
Malaysia		

These regions are experiencing significant economic growth. Their economic success continues to require well trained workers to sustain this growth in the industrial and manufacturing sectors. Economic progress and industrial diversification in these countries necessitate the learning of new technologies, trades and professions.

The United States is Alberta's most accessible export market and can serve as a "springboard" for other export markets. Many of Alberta's private education and training exporters first started selling to the United States.

Other potential markets for Alberta's education and training organizations include Latin America, Africa, Eastern Europe and the Former Soviet Union. These regions all hold potential as their economies begin to develop further and result in increased domestic wealth. Their economies will require programs for a well trained workforce. These are programs that Alberta can provide.

Niche markets exist in Europe, particularly in countries like Germany, Italy and France. These countries should not be overlooked, given their strong interest in education and training. Alberta

should pursue the creation of strategic alliances with these countries to facilitate penetration into other markets.

There are a number of organizations that presently provide training, information and services to Albertans interested in international business e.g. chambers of commerce, business associations, World Trade Centres, independent consultants, and governments, as well as public education institutions.

Situation Analysis

General/Opportunities

- Education and training, as a marketable resource, has recently been recognized as a stand-alone sector. It encompasses services and products offered by a wide range of organizations related to an even wider range of activities.

- Alberta's distance from major markets and its landlocked geography have challenged Alberta's manufacturers when competing in international markets. The increasing importance of knowledge-based economic activities, including education and training, offers a growth opportunity in which geographic impediments are less of an issue.

- There is a growing market in many countries that have the resources to make direct education and training purchases. Alberta has the expertise and the experience to respond to these demands and provide services both in Alberta and abroad.

- The programs and international linkages of Alberta's educational institutions generate funding and create strong international ties for the province.

- As demand increases for educational software/courseware there will be opportunities for growth in specialized support services.

- The export of education and training services and products by Alberta's public sector organizations provides them with another source of funds at a time when government budget allocations for education are declining.

- Value can be added to the export of Alberta products by including the provision of education and training support services. Conversely, the sale of education and training services can lead to product sales.

- The export of Alberta education and training services often creates international goodwill and opens the door for broader and longer-term trading relationships. Also, out-of-country individuals who study in Alberta and Albertans who study abroad return home with a variety of insights and contacts that can lead to stronger commercial and cultural ties.

- International aid agencies, such as CIDA, the World Bank and the Asian Development Bank, are stressing the importance of education and training in developing countries. Increased funding from aid agencies for education and training will result in more export opportunities for Alberta's education and training sector.

- Providers of export training, information and services to Albertans have begun to cooperate in the delivery of their programs.

Weaknesses

- The lack of marketing coordination and/or cooperation among public and private education and training organizations is creating expensive duplication of marketing activities which, in turn, is detrimental to the successful sale of programs and products. As well, there is a definite lack of statistical information on the sector in terms of the value of its exports, the primary export locations, the level of demand, the potential for growth, and Alberta's major competitors.

- Some private education and training firms have a perception that government's primary role is

to provide them with information on international opportunities and to offer them financial assistance and training to help them follow up on those opportunities. As well, some private sector education and training firms feel that public education and training organizations have an unfair competitive advantage. They also feel that private sector access to some government services, such as government funding for marketing, is restricted and unfair to them.

- Public education and training institutions are being pressured by fiscal realities to readdress their role in the marketing and delivery of education and training services both directly and in cooperation with the private sector. Some feel that the regulations and policies under which they are required to operate, place them at a disadvantage to the Alberta private sector and global competitors.

- There is still a lack of coordination among public institutions, private organizations and governments in providing export training, information and services.

Strengths

- A number of Alberta educational institutions already offer programs that promote better understanding of international business.

- For the past several years, Alberta colleges and technical institutions have been cooperating on international development projects and promoting Alberta's training services.

- Alberta's socio-economic growth and strong philosophical and financial support of education and training by its citizens have produced a very modern, adaptive, education and training sector that is responsive to both social and economic progress. Alberta's education and training sector offers highly qualified people and excellent facilities.

- There are certain regions and disciplines where Alberta has been successful in marketing its education and training services internationally.

- In the global marketplace Alberta benefits greatly from Canada's image. This image includes quality, reliability and acceptance of Canadian credentials.

- Alberta benefits from its reputation with students, visitors and buyers as being a safe, clean, friendly, natural environment.

- Providers of export training, information and services have considerable expertise beneficial to Alberta exporters and potential exporters.

Strategy

It is important to recognize that some aspects of strategy necessarily relate to the long term while others relate to the short term. Both perspectives are important and strategies or activities associated with one should not necessarily be seen as more important than the other. In the case of the education and training sector the primary focus of the strategic directions and activities presented in this document reflect those items that relate to the 1995/96 planning period. In an attempt to be complete, longer-term issues and approaches have been included where they have been identified.

A summary of objectives, strategies and related activities are presented in the following tables.

Implementation

- An interdepartmental commitment is required to provide proper resources to ensure the successful implementation of this plan.

Sector Plan

Objectives	Strategy	Activities	Timing	Contacts	Performance
To increase the revenue from the sale of education and training goods and services to the global marketplace	Develop intelligence on the export experience, the expertise and the existing and potential capacity of the education and training sector.	- Develop an inventory of public and private sector organizations in Alberta's education and training sector. Such an inventory to include: • lists of institutions and private firms by subsector. • expertise by organization. • export experience by organization. • the level of interest of each organization in exporting. • the value of existing exports by organization and subsector. • the capabilities of each organization.	1995/96	Advanced Ed. Education ED&T Agriculture Labour FIGA	Completion of inventory
		- Develop a plan to maintain and update the inventory.	1995/96	all	plan complete
		- Consult with public and private sector organizations domestically and internationally to identify priority geographic and discipline markets.	1995/96	all	ongoing
	Develop intelligence on priority market opportunities.	- Initiate an analysis of the competition in priority markets, to include: • identification of competitors. • identification of the markets and disciplines in which competitors are active. • identification of the strategies, strengths and weaknesses of each competitor.	1995/96	all	ongoing
	Develop a marketing plan in cooperation with public and private organizations.	- Develop an information system to capture information on market opportunities on a more timely basis.	1995/96 early		
		- Hold a discussion forum to consult with Alberta public and private sector organizations.	1995/96	all all	ongoing forum held
		- Provide feedback and solicit input on draft marketing plan.	Mar. 1996		
	Assist Alberta's education and training sector in acquiring the skills and knowledge they need to identify and take advantage of national and international opportunities.	- Draft a three year marketing plan.	April 1996	all	Input obtained
		- Identify sector skills and knowledge required for priority geographic and discipline markets.	1995/96	all	plan complete
				all	document fin.
		- Address the specific skills and knowledge needs of public and private organizations in the sector by developing the delivery mechanisms required.	1996/97		
	Assist Alberta's education and training sector, public and private, to work more cooperatively.			all	mech. in place
		- Facilitate the establishment of additional networks.	1996/97		
		- Organize forums to bring members of the sector together to encourage the sharing of information and the formation of networks, strategic alliances etc.	1995/96	all all	Facil. Res. ID. forum held

		- Facilitate the partnering of education and training organizations with Alberta exporters of services and products including the formation of flexible networks.	ongoing	all	one alliance established
		- Promote to Alberta exporters the potential value-added (training component) available in Alberta to enhance marketing (product enhancement).	1996/97	all	Plan developed.
	Raise Alberta's profile nationally and internationally as an experienced, reputable and innovative provider of a wide range of education and training goods and services.	- Provide Canada's Embassies / High Commissions, Alberta's international offices, and Canadian Education Centres with detailed information on education and training programs available in and from Alberta.	ongoing	all	feedback rec.
		- Coordinate, where possible, promotional activities such as education and training fairs with national and international organizations.	ongoing	all	doc. activities attended
		- Organize an Alberta educational fair to which national and international organizations would be invited.	1995/96	all	fair scheduled
		- Pursue direct promotion of Alberta's capabilities with international aid agencies such as the World Bank, the Asian Development Bank and CIDA.	ongoing	all	Contacts est. at each agency
To assist Albertans in becoming more aware globally and more successful world traders.	Provide Albertans with the education and training they need to compete successfully in an increasingly global economy.	- Organize a special roundtable of Albertans with the objective of determining how the education and training sector can best increase global awareness and develop international entrepreneurship among Albertans.	1995/96	all	round table held
		- Develop an Alberta-wide strategy for the training and educating of Alberta businesses interested in exporting.	1995/96	all	doc. complete
		- Develop an inventory of public and private organizations in Alberta which provide export training, information and services. The inventory would include: • a list of institutions/organizations/private firms • the expertise, capabilities and functions of each institution, organization and private firm	1995/96	all	Inventory developed
		- Disseminate the inventory and information to the business community -Organize a meeting of key players to discuss ways to coordinate and cooperate in order to improve the accessibility of export training, information and services.	1995/96	all	meeting held and ways defined

Department Contacts:

Economic Development and Tourism
- Peter Crerar 427-8833 (Chair)
- Joe Hak 422-6236
- Audrey Albrecht -Lee 427- 4323
- Catherine Gordey 422-0561

Federal and Intergovernmental Affairs - Marvin Schneider 427-6543

Agriculture - Ed Bristow 427-4241

Education - Amelia Joy Turnbull 427-2035

Advanced Education and Career Development - Greg Banfield 427-0313; Bob Lamoureux 427-8765

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Education and Training

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
A. Export of Education and Training Services and Products					
Education and Training Industry Action Plan - "Strength In Partnership"	Invitational meeting of industry sub-sectors to develop an improved framework for industry cooperation and planning for exports	07-Apr-95	07-Apr-95	Edmonton, AB	Joe Hak, Economic Development & Tourism (ED&T) - 422-6236
National Association of Small Business International Trade Educators (NASBITE) Conference	Networking opportunity for Alberta providers of international trade training to meet others in the field from the U.S., Mexico, Middle East; identify potential export opportunities for education and training services	09-Apr-95	12-Apr-95	Norfolk, VA	Audrey Albrecht-Lee, ED&T-427-4323
AMTEC '95	Instructions and communications technology conference	14-May-95	17-May-95	Guelph, ON	Catherine Gordey, ED&T - 422-0561
New Exporters to Border States (NEBS) - Professional Trainers	Export Training for professional trainers interested in selling their services into the U.S.	01-Jun-95		Minneapolis, MN	Audrey Albrecht-Lee, ED&T-427-4323
ICCC '95	Computer communications conference	21-Aug-95	24-Aug-95	Seoul, Korea	Catherine Gordey, ED&T - 422-0561
Learn Tech '95	European conference on learning technologies	Fall 95	Fall 95	Europe	Catherine Gordey, ED&T - 422-0561
Canadian Education Fairs	Information distribution on Canadian education opportunities to Japanese students	Fall 95	Fall 95	Tokyo, Osaka & Sapporo, Japan	Amelia Joy Turnbull, Alberta Education, 427-2035
International Education and Training Trade Show	Incoming buyers of education and training services	Fall 95	Fall 95	Alberta	Joe Hak, ED&T, 422-6236
Education and Training Exports Forum	Follow-up to April 7, 1995 industry planning meeting; presentation of Action Plan	Fall 95	Fall 95	To be decided	Joe Hak, ED&T - 422-6236

ACTIVITY CALENDAR: Education and Training					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
AECT	Conference and trade show on computing instructional technologies	Feb-96	Feb-96	To be announced	Catherine Gordey, ED&T - 422-0561
Experience Canada	Outgoing mission, environmental, education, investment	Feb-96	Feb-96	Korea	Gerry Royer, ED&T - 427-4809
B. Training for Exporters and Potential Exporters					
"Trade Day"	Seminar; Custom's requirements for goods crossing U.S./Canada border	16-May-95	16-May-95	Coutts/Sweetgrass, MT	Audrey Albrecht-Lee, ED&T-427-4323
Seminar on selling to the Government	Government/Procurement	04-Jun-95		Calgary, AB	John Jacobson, ED&T - 427-1905
American Public Works Conference	Government/Procurement	Sep-95	Sep-95	Chicago, IL	John Jacobson, ED&T - 427-1905
World Markets at Your Doorstep, Trading House Conference	Export opportunity trade show to introduce Canadian Companies to Trading Houses as cost-effective means of accessing the international marketplace	05-Dec-95	06-Dec-95	Calgary, AB	Drew Hutton, ED&T - 422-6236
Forum for International Trade Training (FITT) - FITT Skills Programs	Practical skill training for business people interested in international business	Ongoing		Edmonton/Calgary, AB	Audrey Albrecht-Lee, ED&T-427-4323
NEBS Missions	Industry specific training for companies interested in exporting to the U.S.; please check the sector listings for specific industry	Ongoing		U.S.	Audrey Albrecht-Lee, ED&T-427-4323 David Rous, Alberta Agriculture, Food & Rural Development (AF&RD) - 427-4241
Reverse NEBS	Industry specific training for companies interested in exporting to the U.S.; please check the sector listings for your specific industry	Ongoing		Alberta	Audrey Albrecht-Lee, ED&T-427-4323

Energy and Oil and Gas Equipment and Services

Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Energy and Oil and Gas Equipment and Services

* ***Energy resources and related products development account for approximately 20% of the Alberta economy.***

* ***Royalties and bonuses account for approximately 20% of provincial government revenue.***

* ***The challenging geological and climatic conditions in Western Canada have given rise to the development of unique and specialized equipment and skills in the energy and minerals sector that are competitive worldwide.***

Definition

This sector covers the design, manufacture and servicing of resource extraction equipment, as well as the development and sale of extracted minerals and energy production equipment and services. It includes oil and natural gas, oil sands, coal, sulphur, power generation technologies, minerals and metals, the design and manufacture of equipment and provision of services in the areas of geophysical, drilling and service rigs, and supply of oilfield services.

Background

In Canada, natural resources found within provincial boundaries are generally owned by the provincial government. Consequently, provincial governments have ownership and regulatory management responsibilities including establishing resource development policy and setting the legislative and regulatory framework.

Alberta encourages resource development through reliance on the private sector. The Alberta Department of Energy leases mineral rights and collects an owner's share of resource production in the form of a royalty. The fiscal system is designed to encourage development by making investment attractive to the private sector. Both the Alberta and federal governments are committed to reliance on market forces to determine the timing and nature of resource development and how energy resources are marketed. This dual level commitment to the market is reinforced by international trading commitments through GATT, NAFTA and its predecessor the FTA.

Development of energy resources and related products represents over 20% of the provincial economy, and royalties and bonuses account for approximately 20% of provincial government revenues. Given the importance of the industry to Alberta, the government has a responsibility and interest to ensure the fiscal and regulatory environment encourages market-based development. The Alberta government also has an interest in ensuring that the market works effectively, without distortion, to ensure competitive access for Alberta resources, given Alberta's position as a significant oil and gas supplier in North America.

The Alberta industry has developed an extensive and unique capability for finding, producing, processing, transporting, and utilizing conventional oil and gas, oil sands and coal. This in turn has created an extensive equipment manufacturing, supply and service sector, which is increasingly active and competitive internationally. Furthermore, the challenging geological and climatic conditions in Western Canada have resulted in development of unique and specialized equipment and skills.

Alberta is addressing national and international air quality concerns associated with energy consumption through its Clean Air Strategy. This multi-stakeholder process leads the way in Canada for achieving the necessary balance in air quality management.

The upstream production sector comprises oil and natural gas, oil sands, coal, sulphur, electrical equipment technologies and services, and mineral and metals. Each is discussed further

in the following pages. Oil and gas equipment and services, and chemicals, petrochemicals and refined petroleum products are described in separate sections of this plan.

Structure of Sector

Resource Base	Equipment & Services	Production & Processing	Refined Products, Chemicals & Petrochemicals
Mineral Rights Royalties	Services Exploration Development Production Processing Transportation Engineering Design Training Equipment Exploration Development Production Processing Transportation Resource Management	Conventional Oil	Gasoline Jet Fuel Diesel Fuel Fuel Oil
		Natural Gas	Natural Gas Sulphur
		Ethane	Petrochemicals
		Propane	Propane
		Butane	Petrochemicals
		Pentanes Plus	Refined Products
		Oil Sands	Bitumen SCO Refined Products
		Coal	Coal Electricity
		Minerals	Nickel, cobalt Magnesium carbonate

Oil and Natural Gas

International Overview

Alberta is a major oil and gas producer, producing over 84 million m^3/year of crude oil and equivalent and over 4 tcf/year of natural gas with a total value of $16.3 billion. Roughly 30% of this production is exported to other provinces, and a further 50% is exported to the U.S., through an extensive oil and gas pipeline network. Natural gas exports to the U.S. are the strongest growing market segment.

By-products from natural gas production include natural gas liquids (ethane, propane, and butane) which are used as petrochemical feedstocks, and sulphur. These by-products are valued at an additional $1.6 billion per year.

Alberta crude oil prices are determined by world oil prices. International oil prices also have an impact on North American natural gas prices. International oil prices reflect the extent to which the Organization of Petroleum Exporting Countries (OPEC) manage their production of crude oil to meet international oil demand. However, the international oil market reacts to periodic news and rumours of OPEC strategies, dropping demand, increasing production, or growing stocks resulting in considerable price volatility.

Many countries are dismantling their state-owned and controlled petroleum corporations and liberalizing regulations to attract private sector investment. This represents both increased competition for investment capital -- a challenge addressed by Alberta maintaining a stable and attractive domestic investment climate -- and an opportunity for domestic companies to export expertise. An additional consequence of this liberalization has been significant increases in non-OPEC oil production with downward pressure on oil prices.

Since deregulation in 1985/86, Alberta crude oil and natural gas prices have been determined by market forces of supply and demand. Alberta natural gas prices are determined in the various North American markets where Alberta gas competes with gas from other North American supply basins. Alberta gas prices are also influenced by more local factors such as the ratio of gas deliverability to Alberta demand and export pipeline capacity and extended periods of unexpected weather.

Worldwide, natural gas demand is growing strongly, with significant growth in demand for liquefied natural gas (LNG), especially in Asia.

Key to this is its perception as a more environmentally friendly and economically competitive energy source.

Alberta Position

Since 1986, Alberta's oil and gas industry has restructured, reducing costs and improving efficiency to enhance its competitiveness. The change was most dramatic in natural gas. Alberta's gas industry has cut reserves-to-production ratios in half, to levels more consistent with U.S. levels, and has become fully integrated into the North American market through pipeline expansions and the emergence of electronic gas exchanges. With respect to oil, Alberta companies have made significant advances in designing and utilizing new technologies to enhance production from Alberta's mature conventional oil reservoirs. The industry's improved financial performance, and prospects for continued growth, have resulted in significant new investment for exploration and development.

Open access to the U.S. market, as enshrined in the FTA and NAFTA, is critical to the industry's expansion. Since 1986, natural gas exports to the U.S. have tripled (from 635 bcf to 1.9 tcf in 1993) while crude oil and equivalent exports to the U.S. have increased by over 50% over the same period (from 429,000 b/d to 646,000 b/d in 1993).

The economies of LNG exports of Alberta natural gas continue to be unattractive compared with the more cost-efficient pipeline access to North American natural gas markets.

Strategic Direction and Priorities

The key elements of the government's strategy for the oil and gas sector are:

- Maintaining a stable royalty regime that is appropriate for the Alberta resource base, is responsive to price fluctuations, and allows the private sector to develop resources profitably at a sustainable rate over time.
- Maintaining and continuously improving a utility regulatory framework to promote a low cost, open access transportation system and efficient markets for gas and oil.
- Allowing competitive access to resources while ensuring protection of the environment.

Priorities include:

- Review regulations and legislation to eliminate unnecessary procedures and streamline as necessary to reduce the regulatory burden on industry and cost to the government.
- Complete the amalgamation of the ERCB and PUB into the Alberta Energy and Utilities Board (AEUB) to provide better coordination and one-window access to regulation.
- Eliminate overlap and duplication with federal agencies affecting the oil and gas production and pipeline sectors.

Oil Sands

Alberta Position

Alberta's oil sands are a vast resource covering over 78,000 square kilometres of the province. The remaining ultimate potential amount of crude bitumen recoverable from the oil sands is approximately 300 billion barrels - enough to satisfy Canada's crude oil requirements for hundreds of years. Bitumen, which is heavier than conventional heavy crude oil, is extracted from the oil sands deposits, and is then either mixed with diluent and sold in a blended form or is upgraded to a higher quality synthetic crude oil. Synthetic crude oil has characteristics similar to sweet light crude oil.

Production of bitumen and synthetic crude oil from Alberta's oil sands totalled 137 million barrels in 1993 and was valued at C$2.4 billion. This represented over 22% of Canada's crude oil and equivalent production. The primary market for this production is North America, although some bitumen is also exported to Asia.

Oil sands resources also exist in 35 countries around the world (the most significant of which are Venezuela, Russia, United States, Nigeria, Chile, China and Madagascar). Alberta, however, is recognized as the world leader in commercial oil sands production and associated technology development. To further develop their own oil sands, several of these other countries have technology cooperation agreements with Alberta research organizations such as the Alberta Oil Sands Technology and Research Authority (now incorporated into the Department of Energy) and the Alberta Research Council. Recognition of Alberta's expertise in this field was most recently evidenced by the relocation of the United Nations Institute for Training and Research (UNITAR) Centre for Heavy Crude and Tar Sands from New York to Edmonton in 1994.

Alberta's extensive oil sands resources have the potential not only to support Canada's future energy needs but also to provide significant export opportunities. The keys to fulfilling this potential are new technology to reduce current capital and operating costs, and new stakeholders to provide the necessary investment required for further development.

The Alberta government supports the development of its oil sands resources, but the main driving force comes from the private sector. To date, Alberta's oil sands development has been led primarily by multinational oil companies. Recently, however, countries such as Japan, China, South Korea and Taiwan, have made investments or have expressed interest in Alberta's oil sands resources.

Strategic Direction and Priorities

The government's oil sands strategy is to accelerate oil sands development by placing a primary emphasis on improving the viability of current oil sands operations and promoting long-term expansion of oil sands production. This will be achieved by focusing on technological advances to lower the cost position of oil sands production and upgrading relative to other supply sources around the world. Other elements of the strategy include ensuring the fiscal and regulatory framework is conducive to further oil sands development and attracting additional investors into oil sands development.

Priorities include:

- Re-examining and restructuring of the government's oil sands research support to achieve closer integration of research management with Departmental oil sands policy.

- Closer coordination of Alberta's research effort with industry and federal government research, primarily through vehicles such as the Energy Research Council, Canadian Oilsands Network for Research and Development (CONRAD), National Centre for Upgrading Technology (NCUT), and the UNITAR Centre for Heavy Crude and Tar Sands.

- Working with industry to facilitate the implementation of, and remove uncertainties surrounding, the new lease tenure regulations.

Coal

Alberta Position

Alberta's coals are characterized by low sulphur content and high reactivity, providing considerable environmental advantages. The province's coal producers have earned an international reputation for reliable delivery of a consistently high quality coal, satisfying increasingly stringent specifications required by clients.

Twelve major coal mines produce three types of coal for three different markets.

	1993 Production (million tonnes)
Subbituminous; ***Domestic Market; (Mine-mouth Electricity Generation in Alberta);*** (6 mines)	24.8
Bituminous Metallurgical High Quality, Low Sulphur; ***Export Market; (Steel industry);*** (4 mines)	6.5
Bituminous Thermal Low Sulphur; ***Export Market; (Power Generation);*** (2 mines)	3.0
TOTAL	**34.5***

* Not additive due to rounding

In 1993, of the 34 million tonnes of Alberta's marketable coal, 24 million tonnes were used to generate low cost electricity in the province, electricity with costs among the lowest in North America.

The province shipped over one million tonnes to Ontario and exported nearly nine million tonnes to Japan, South Korea, Brazil, Chile, Italy, Mexico, the United Kingdom and the United States.

Alberta accounted for 50% of Canada's total coal production and 29% of Canada's total coal exports based on tonnage.

Metallurgical Coal Export Markets

Traditionally the demand for Alberta metallurgical coal has been closely tied to steel production in Asia. New steel technologies are reducing steel making dependence on hard metallurgical coal and opening up the market to semi-soft coking coal.

Thermal Coal Export Markets

Power generation demands outside the province, current and projected, are leading to increasing exports of Alberta's thermal coals.

Competition

The province's major Canadian competitors are coal mines in British Columbia and Nova Scotia. Its mines also compete for market share with those in Australia, the United States, Europe, South Africa, Colombia and Indonesia.

Challenges

The producers' major challenges are to maintain cost competitiveness in the export market, to retain their existing metallurgical coal exports, and to increase thermal coal exports.

Notwithstanding the long inland transportation distance from mine-site to export market coal terminals in Vancouver, or to Thunder Bay for shipment of Alberta coal to Ontario Hydro, the industry is continuing to improve its efficiency and to remain competitive.

Strategic Direction and Priorities

The government continues to recognize that the private sector is responsible for developing and marketing coal in response to market signals with a minimum of regulation.

The key to continued viability for the export sector and the focus of the government's strategy is to work with the industry to reduce rail and port terminal charges while relying on the industry to continue to raise mining productivity.

The strategy for maintaining the long-term viability of subbituminous coal is to ensure that it is provided the opportunity to compete fairly with other fuels in the supply of electrical power in Alberta.

The priority is to articulate the long-term, strategy for coal development in Alberta, to:

- Include actions to pursue lower provincial and municipal taxation of rail property and diesel fuel for railways, and reduce port terminal charges for export coal, in cooperation with the federal and B.C. governments. Ensure that any savings that result are passed on to shippers.
- Include details of a long-term subbituminous coal development strategy within the context of the current review of the electricity regulatory framework and industry structure.
- Include details of actions to ensure the industry is subject to a minimum of regulation.

Sulphur

International Overview

About 60% of the sulphur consumed in the world is used to produce fertilizers. The second largest user

is the chemical industry, in products ranging from pharmaceuticals to synthetic fibres in plastics.

In 1992, Canada accounted for 18% of world sulphur production. That year Canadian production was about 6.4 million tonnes.

Sulphur prices rose in 1994, recovering from their major fall in 1992 when Saudi Arabia, Poland and the U.S. disposed of over two million tonnes of blocked product. Poland and Saudi Arabia disposed of another one million tonnes in 1993 and now have much reduced stocks. Shipments from Poland and Saudi Arabia are now in decline.

Canada, Poland and Saudi Arabia (Aramco) were the main exporters of sulphur in 1994. As prices rise, more and more producers are likely to opt for selling rather than blocking their product. Higher prices will help central Asia producers find answers to the major logistical problems they have faced in the past.

Most estimates of Canada's offshore exports for 1995 are in the range 3 to 4.1 million tonnes. There will be three "new" offshore Canadian suppliers in 1995 since the former leading members of Prism Sulphur Corporation -- Husky, Shell and Amoco -- have resigned effective December 31, 1994. Until now, Prism had been Canada's major sulphur marketing group. The effect on future prices is not yet clear.

Current worldwide production is thought to be sufficient to meet worldwide demand.

Alberta Position

Natural gas, oil sands and crude petroleum account for the majority of Canadian production of sulphur. Most of this is produced involuntarily in Alberta as a by-product of natural gas production. Alberta produced 6.6 of Canada's 7.2 million tonnes of sulphur production in 1993, of which over six million tonnes were from Alberta's natural gas.

Canadian sales in 1993 were 4.85 million tonnes, of which 4.26 million were from Alberta. The main customers in 1994 were the U.S. and overseas. Overseas markets in 1994 included Brazil, Chile, China, India, Indonesia, Israel, Morocco, New Zealand, Senegal, South Africa, Thailand and Tunisia. The Sultran company operates special unit trains for the transport of solid sulphur to ports in Vancouver.

Previous world sulphur prices have resulted in Alberta gas processors stockpiling a significant portion of total production At the beginning of 1994, Alberta had a sulphur inventory of 5.5 million tonnes, two million of which had been added during 1993.

Challenges

The current challenge is to retain market share by maintaining cost competitiveness and aggressively pursuing innovative marketing strategies.

The challenge is also to develop new markets for sulphur, such as plant nutrient sulphur (PNS) and new uses such as in concrete, as asphalt extenders and similar applications.

Strategic Directions

The Government of Alberta continues to recognize that the private sector is responsible for managing stockpiles and marketing sulphur in response to international opportunities.

Electric Power Generation

Alberta Position

There are two investor-owned electric generating utilities in Alberta - TransAlta Utilities Corp. and Alberta Power Ltd. - and two that are municipally-owned - Edmonton Power and the City of Medicine Hat. The transmission systems of these four utilities are interconnected to form the Alberta Interconnected System (AIS).

Total installed generating capacity on the AIS is 7,687 megawatts (Mw), of which 5,704 Mw are coal-fired, 1,153 Mw are natural gas-fired, 795 Mw are hydro and 35 Mw are wind and small

hydro licensed under the Small Power Research and Development Program. There is an additional 753 Mw of industrial on-site generation capacity.

The AIS is interconnected with Saskatchewan and B.C. Power exchanges take place to maximize the benefits to the different systems. A small amount of surplus interruptible energy is delivered to B.C. Hydro, which is in turn exported to the U.S.

Strategic Direction and Priorities

The government's primary objective for the electricity generation sector is to ensure that electricity is low cost and continues to be a significant element of the "Alberta Advantage". The strategy is to develop a regulatory framework and industry structure that promotes a highly efficient electricity sector that can benefit from technological advantages and respond efficiently and effectively to challenges and opportunities inside and outside Alberta.

Priorities include:

- Merger of the ERCB and PUB into the Alberta Energy & Utilities Board to provide greater coordination and clarity in handling regulatory issues that span the jurisdiction of the current Boards.

- A government and industry steering committee has developed a proposal to introduce industry structure and regulatory reforms into the electricity industry. The main components of the proposal include: open competition in generation, stronger performance incentives in electric utility regulation, and a study of allowing customers the option to make their own arrangements for new generation.

Minerals and Metals

International Overview

The internationally traded minerals and metals commodities sectors are dominated by major, sophisticated international companies engaged in exploration, extraction and processing of minerals. Metals and higher value commodity minerals are traded around the world and compete on the basis of delivered price and reliability of supply. Specifications are standardized and there is little opportunity to compete on quality. Thus, competitive costs are of paramount importance and the primary basis of competition is price. Lower value industrial minerals and mineral products, such as sand and gravel, limestone, cement and cement products, are produced near consuming centres and are not traded internationally to any great extent. For those commodities, transportation is a significant component of delivered cost and local suppliers are relatively well insulated from international competition.

Alberta Position

The Alberta industry mostly produces the lower value industrial minerals except for one company that produces nickel and cobalt from imported concentrates. Total industry shipments in 1991 were just over $750 million. Of this, over $700 million consisted of industrial minerals and mineral products, of which only 5% were exports, and less than $50 million consisted of metals, most of which were exports. Canada's total production of metallic minerals and metals in 1991 was nearly $10.5 billion dollars. Alberta's production of nearly $50 million was less than one-half of one percent of that total. This does not mean that Alberta lacks the potential to have a significant metallic minerals industry, but that exploration and geophysical work in the province is directed primarily toward hydrocarbons. Total non-fuel exploration expenditures in Alberta in 1992 were less than 1% of the Canadian total and less than in any other territory or province except for Prince Edward Island and Nova Scotia.

Industrial minerals, while not offering much additional opportunity for exports, nor being threatened by imports, do contribute to the overall competitiveness of Alberta industry. It is important, therefore, that the industry continue to avail itself of the best technology and production methods and to keep costs as low as possible. The metallic minerals and metals sectors offer greater

opportunity to contribute to future economic growth. Lack of operating mines means only that economic mineral deposits have not been found, not that they don't exist. Favourable geological settings are thought to occur in the Canadian Shield in Northern Alberta, the volcanic rocks of Southern Alberta, the Clear Hills area of northwestern Alberta and the oil sands near Fort McMurray.

Strategic Direction and Priorities

The government's strategy for encouraging mineral exploration in the province is based primarily on increasing the quality and quantity of baseline geological information necessary to attract the attention of the mineral exploration industry.

The priority is to continue to support the development and dissemination of the geoscience database through the Mineral Development Agreement and related activities of the Alberta Geological Survey.

Oil and Gas Equipment and Services

International Overview

The manufacturers of oil and gas field equipment produce a wide variety of machinery and components used in exploration for oil and gas deposits, in drilling and servicing wells, in producing and processing oil and gas in the field, as well as for sour gas processing, pipeline transmission and distribution. The industry encompasses manufacturers of geophysical prospecting equipment, drilling rigs and ancillary tools, cementing and well-fracturing units, pumping and down-hole equipment and dehydrators, separators, treaters and other field-processing components.

The total world output for oil and gas field equipment is estimated at US $30 billion per year. With capital spending by international oil and gas producers expected to reach $200 billion per year for the next five years, growth in the oil and gas equipment sector is expected to remain high. Much of this business will be directed to suppliers of exploration and development drilling equipment, processing plants and transportation systems. While oil and gas well drilling is operating at a high level in North America, important gains are also being undertaken in petroleum drilling and production in South America, Africa, the Middle East, the Commonwealth of Independent States (CIS), the North Sea and Asia. Many of the major oil companies, including smaller Canadian firms, are expanding their exploration and production budgets for foreign operations. Many countries are privatizing their state-owned and controlled petroleum corporations and liberalizing regulations to attract private sector investment. This represents both increased competition for investment capital -- which is addressed by maintaining attractive domestic investment climates -- and an opportunity for domestic companies to export technology. Changes to legal and business practices, such as privatization, are also attracting western participation in many countries (e.g. former centrally controlled economies).

Foreign markets are expected to take a larger share of Canada's oil and gas equipment and services output in the long term. Oil companies will spend a larger portion of their exploration and development expenditures outside North America. The desire for many foreign petroleum-producing countries to earn hard currency through petroleum exports, is encouraging them to reduce restrictions on foreign investment and imports of petroleum equipment.

A compelling factor in favour of exploration and production (E & P) equipment exports to developing countries is the rapid pace of technological change. Many developing countries need to maintain oil production to earn foreign exchange and cannot afford to wait for development of their domestic technological expertise.

The development of new drilling and production techniques will stimulate the design of more productive oilfield equipment. Further refinements in three-dimensional survey equipment, measurement-while-drilling (MWD) instruments and horizontal drilling machinery, are likely to further raise drilling productivity. The use of coiled

tubing for well servicing and drilling operations is expected to continue to expand.

The worldwide market for oil and gas E&P equipment and services (excluding China and the CIS) was $45 billion ($30 billion E & P equipment and $15 billion services) in 1993. It is expected to grow to $1.2 trillion over the next two decades. Canadian suppliers have the potential to capture $60 billion or 5% of that market.

Alberta Position

Exploration and production companies in the Canadian oil and gas sector are supported by a wide array of firms that provide equipment, products and services. Over 80% of these companies are based in Alberta.

About 1,850 companies in Alberta provide services to the industry in three main areas of geophysical, drilling and service rigs, and oilfield services and supply. In the geophysical group, about 150 companies provide general contracting, seismic drilling, seismic data processing and interpretation services and supply services. The drilling group includes 100 oil well drilling companies and 66 service rig contractors. About 650 companies provide services and supplies to the industry, such as cementing and stimulation, drilling and completion tools and services, drilling fluids, logging and perforating, production testing, safety, well economics, and development and production consulting. Approximately 200 trucking companies service the oil and gas industry and over 700 companies operate supply and rental stores.

Alberta-based pipeline companies have designed and constructed pipelines through many sensitive areas in Canada using proven environmental technologies, expertise and practices that are now being applied worldwide. Pipelines constructed using Alberta expertise run through mountainous terrain, prairie wetlands, northern permafrost, wildlife habitats and across large water courses. Impacts to the environment are mitigated, topsoil and natural drainage patterns preserved, and archaeological sites preserved and protected. Alberta companies have extensive knowledge and expertise in operating pipelines using advanced SCADA systems, operator training and pipeline integrity in the transportation of crude oil and natural gas.

According to the Petroleum Communication Foundation, the Canadian oil and gas industry directly employed approximately 224,000, and indirectly 262,000, people in 1994. In Alberta, the petroleum industry directly and indirectly employs 140,000 people (11% of Alberta employment).

In addition to the service companies, there are approximately 250 oil and gas equipment manufacturers in Alberta. These companies provide a wide range of machinery and components, modular and custom made equipment, cold climate technology, stimulation of low productivity wells and a wide range of standard products and high volume production items.

Alberta-specific export data is not available from Statistics Canada for comparison as information is not neatly listed in oil and gas categories. Rather, information is detailed in generic categories, such as engines of a certain cc size or pumps used for all disciplines and not particularly pumps used in the oil and gas industry. The 1991 Industry Canada data for Canadian oil and gas equipment manufacturers indicated equipment manufacturers employ approximately 4,400 people. Additional employment is generated by numerous local machine shops which manufacture a significant amount of component parts and assemblies under subcontract.

Canada's share of the world export market in 1991 was approximately 2.2%. Total Canadian shipments in 1991 (in current dollars) were estimated at $760 million of which $330 million or 43% were exports. The Commonwealth of Independent States (CIS), South Asia and China accounted for 60% of the exports. South America, the Middle East and Africa accounted for 25%, the U.S. 10%, and the European Community 5%. Statistics do not include the fastest growing export sector, namely services.

Canadian imports were estimated at $170 million, representing 28% of the domestic market. About 97% of imports came from the U.S. Canadian firms have developed advanced technologies related to drilling, as well as specialized recovery and processing products, often in cooperation with their key customers. These advanced technologies include automatic computer controls to reduce manual labour, optimize processes and performance, and improve safety in operations on the rig floor. With a solid track record, Canadian firms have created the confidence in their equipment needed to gain and sustain markets based on a reputation for supplying high-quality products. Despite its small world-market share, the Canadian oilfield manufacturing industry is recognized as one of the leading suppliers of niche advanced petroleum equipment (e.g. horizontal drilling motors, sour gas processing equipment and cold weather technology for the oil and gas industry).

The sector has increased its productivity over the past 10 years through rationalization, installing more automated production equipment and making other production improvements. Numerous cost-reduction programs have been successfully implemented. As a result, the sector has been able to maintain its viability and expand exports.

Subsectors

1. *Exploration*

   A. Equipment: Examples are geophysical prospecting equipment; drilling rigs; drill bits and ancillary tools; top drive units; mud motors; drill string components; surface drilling components (mud pumps, blow out preventers, drilling instrumentation); mud processing units (desanders, desilters); BOP system controls; pipe handling equipment; miscellaneous rig equipment; cementing and wireline equipment; perforating and fishing equipment; and compressor packages.

   B. Services: Examples are seismic and logging services; geophysical data processing and interpretation; lease preparation; camps and catering; directional and horizontal drilling and related services; perforating; cementing and well stimulation; production testing and slickline services; data and information management; computer and supplies; environmental services; well fire fighting; and sour gas safety services.

2. *Production*

   A. Equipment: Examples include wellhead equipment; artificial lift equipment (sucker rod pumps, electric submersible pumps and control systems); pump packages; down-hole equipment (packers, components and production tools); surface production equipment (separators, treaters, dehydrators, satellites and batteries complete with instrumentation and controls); well stimulation equipment; fieldgate and gas processing plant equipment (pressure vessels, fractionating towers, heat exchangers, sour gas treaters); and compressor packages.

   B. Services: Examples include well testing and services; corrosion monitoring and control; and wireline services.

3. *Transportation*

   A. Equipment: Examples include gathering systems; transmission lines and distribution systems; valves; compressor packages; SCADA systems; internal inspection tools; corrosion monitoring and control systems; rural distribution systems; and off-road vehicles.

   B. Services: Examples include engineering; internal inspection expertise; corrosion protection; tubular goods coating and inspection; pipeline operation management and expertise; and oilfield trucking and heavy hauling.

4. *Engineering, Construction and Project management Services*

   A. The subsector includes facilities and related infrastructure engineering and project management for all aspects of the oil and gas business.

5. *Training and Safety Services*

   A. The subsector includes institutional, private training companies and in-house/company training for all aspects of the oil and gas business.

6. Other energy and environmental management and regulatory advice related to petroleum development.

Strategic Direction and Priorities

The overall objective of the Alberta government is to support, sustain and develop a prosperous, globally recognized and competitive Alberta oil and gas equipment and services sector and to assist with its successful participation in international markets.

Priority Markets

- <u>Mature Oil Producing Country Markets</u>

  Mature oil producing countries are countries that have well developed oil and gas fields, are major producers of oil and gas, or have had previous significant production of oil and gas and may require Enhanced Oil Recovery (EOR) techniques, advanced production techniques, or enhanced pipeline development that are not available through their own domestic capabilities. These include: Saudi Arabia, Kuwait, Oman, Egypt, Iran, Algeria, Libya, Indonesia, Malaysia, India, China, the North Sea, Romania, Russia (western Siberia), the U.S., Mexico and Venezuela.

  It is recognized that countries in this category will require expertise that can be applied to existing industry infrastructures (i.e. improve production flows, replace or modernize equipment or provide advice of a technical nature). Alberta companies working in these markets will be working with developed oil and gas infrastructure systems that require the latest technology to improve production in the manner of EOR, replace or modernize equipment, improve techniques, or provide advice of a technical nature.

- <u>New Producer Country Markets</u>

  Countries or regions in this category produce some oil and gas, have proven oil and gas production potential, have some pipeline capacity, or are just getting their industry under way. These include: Thailand, Philippines, Pakistan, Eastern Europe, Ukraine, Russia (eastern Siberia), Kazakhstan, Azerbaijan, North Africa, Nigeria, Newfoundland, Argentina, Brazil, Colombia, Peru, Bolivia, and Ecuador.

  Alberta companies in these markets will require expertise in working with oil and gas industries that are undeveloped, are low technology based, or have oil and gas industry structures and pipeline systems that are outdated or worn out.

- <u>Emerging Oil and Gas Producing Country/Region Markets</u>

  Countries in this category have no significant previous oil or gas production, but have potential for, or have undeveloped, oil and gas industry management capabilities. These include: Vietnam, Thailand, India (gas), Pakistan (oil), Turkmenistan, Uzbekistan, Eastern Africa, South Africa, Ukraine and Cambodia.

  Alberta companies working in these markets will be primarily involved in exploration activities and, as such, will be required to have expertise. Ability to finance or arrange financing for projects in these markets is necessary for success.

- Gateway Countries and Cities Markets

  These are countries, cities or regions that are cross-roads for trade and technology, major trading centres, major service centres, possess a high concentration of oil and gas head offices, function as regional offices with decision-making ability, or function as an oil and gas network hub. These include: Singapore, Cyprus, Finland, Malta, Houston, Vienna, London, Bahrain, and Dubai.

These markets are regional or world centres (Houston and Singapore) for Alberta companies to focus on in identifying projects, partners and financing in adjacent countries and/or worldwide.

- Major Consumer Country Markets

  These are countries that can be characterized as having little or no significant oil and gas reserves, but that have a vested interest in obtaining supply. Countries in this category are potential sources of finance for project development and are a major market for all downstream oil and gas products. These include: Japan, South Korea, Western Europe in general (except Norway and UK).

Strategic Direction

The strategic direction for the oil and gas field equipment and services industry is shaped by the following bases of international competition:

- Technological expertise in certain niche markets where Canadian firms have developed a superior product or service
- The availability of complementary services, such as engineering and training
- Price competitiveness
- A physical presence in the market
- A proven international track record.

Alberta Economic Development and Tourism and the Alberta Economic Development Authority will endeavor to increase the international competitiveness of the Alberta oil and gas industry in the following ways:

- Liaise with industry associations to facilitate information dissemination and help promote sector development.
- Encourage Alberta company linkages, consortia formation and flexible business network development.
- Facilitate manufacturing and service growth through business establishment, plant expansion and investment prospecting.
- Enhance sector competitiveness through business skills development, technology transfer and new product/technology development, and by participating in manufacturing expertise and technology awareness missions.
- Assist with export development in priority markets through incoming and outgoing trade missions, domestic and international trade fairs and promotion of strategic alliances.
- Ensure availability of competitive transportation infrastructure and continue to support deregulation of the transportation industry, where applicable.
- Promote the adoption of Alberta codes and regulatory frameworks (such as ERCB, Land Titles and environmental codes) by petroleum producing countries.
- Work with Statistics Canada and other stakeholder departments to improve the definition of industry sectors and export destinations in export statistics.

The key to the long-term growth rate of the Canadian oil patch depends on the successful expansion to countries with a strong and dynamic petroleum industry.

Alberta Economic Development and Tourism and the Alberta Economic Development Authority, in cooperation with industry will:

- Participate in recognized trade fairs (e.g. Offshore Technology Conference in Houston, Texas; Offshore Northern Seas '96 in Stavanger, Norway; Offshore Europe in Aberdeen, Scotland; MIOGE '95 in Moscow, Russia; Offshore Southeast Asia '96 in Singapore; Offshore Newfoundland in St. John's, Newfoundland; National Petroleum Show '96 in Calgary, Alberta; and Calgary Oil and Gas Show '95 in Calgary, Alberta. (Federal Department of Foreign Affairs and International Trade (DFAIT)).

- Participate in incoming missions of foreign buyers to meet with Canadian firms, particularly in conjunction with the National Petroleum Show in Calgary, Alberta (DFAIT, Canadian Posts, Petro-Trade).

- Continue to identify investment opportunities and transfer foreign technologies and products (technology acquisition and transfer) through missions to and from countries such as France, the UK, Norway, the U.S., Germany, and Italy (Industry Canada, DFAIT, Canadian Posts).

- Work with the Petroleum Services Association of Canada (PSAC) and Petro-Trade to establish a presence abroad, either by opening offices directly or by hiring Canadian expatriates who have worked in the market as local representatives in the key markets. A local representative acting for two to three Canadian companies can be a financially advantageous compromise for medium-sized firms (Industry Canada, PSAC, Petro-Trade).

- Encourage and assist firms to develop more market opportunity analysis and identification through the Program for Export Market Development (PEMD) in order to develop a substantial, long-term and sustained presence in a target foreign market (Industry Canada, DFAIT).

- Assist PSAC and Petro-Trade to undertake their defined objectives in terms of export sales for members consistent with opportunities, supply capacity and trade development activities with industry representatives to identify the most appropriate export strategies (Industry Canada, DFAIT, PSAC, Petro-Trade).

- Place more emphasis on projects that highlight Canadian technology and expertise such as sour gas, heavy oil and secondary recovery projects (Industry Canada).

- Encourage PetroCanada International Management Services (PCIMS) to specify Canadian-made equipment and services wherever possible (Industry Canada, PSAC).

- Deliver foreign market/project opportunity information to Canadian firms as well as strategic information and analysis to business (Industry Canada, DFAIT, Canadian Posts).

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Energy and Oil and Gas Equipment and Services

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Oil and Gas Mission	Mission to the Middle East	Apr-95	May-95	Turkey, Iran & Syria	Abbas Al-Saigh, Economic Development & Tourism (ED&T) - 427-4327
Strategic alliances with NFLD companies - Hibernia project	Oil & Gas	Apr-95	Ongoing project	St. John's, NFLD	Susan Elliott, ED&T - 427-1905
EXPETRO'95	Conference and Trade Show; Mexican Association of Petroleum Engineers	Apr-95	Apr-95	Veracruz, Mexico	Brian Westlund. ED&T - 427-4809
Tecnomin '95	Exhibition of mining equipment and services	Apr-95	Apr-95	Lima, Peru	Mark Spencer, ED&T - 427-4809
Moscow International Oil and Gas Exhibition (MIOGE) '95	3rd Annual oil and gas show targeted to Russian market; sponsored by Russian Ministry of Fuel and Energy; onshore and offshore technology	05-Apr-95	08-Apr-95	Moscow, Russia	Norm Morrison, ED&T - 422-6236 Patricia Piironen, ED&T-427-4809
Gas Oil Ural'95	International trade fair on petrochemical, oil and gas processing and extracting industry	17-Apr-95	21-Apr-95	Ufa, Russia	Patricia Piironen, ED&T-427-4809 (not participating)
Outgoing mission	Oil and gas mission to Central and Eastern Europe	27-Apr-95	22-May-95	Hungary, Slovakia, Czech Rep. Poland, Ukraine, Romania	Don Wilson, ED&T - 427-4809
Offshore Technology Conference (OTC) and Trade Show	Oil and gas show targeted to North and South American markets	01-May-95	04-May-95	Houston, TX	Don Chinski, ED&T - 427-4809; Norm Morrision, ED&T - 422-6236
Oil and Gas Equipment and Technology Trade Mission	Outgoing Mission; coordination with CAPC - Phase II opening	May-95	May-95	Beijing, China	Josephine Choi, ED&T - 427-4809

ACTIVITY CALENDAR: *Energy and Oil and Gas Equipment and Services*

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Trade Mission to Central Asia	High level delegation to promote Alberta technology in sour gas, high pressure oil and gas production, processing and distribution	10-May-95	22-May-95	Kazakhstan, Uzbekistan, Turkmenistan and Azerbaijan	Patricia Piironen, ED&T-427-4809
Caspian Oil & Gas Show '95	International oil and gas exhibition for the Caspian, Transcaucasian and Central Asian Republics for onshore and offshore technology for exploration, production and pipelines	23-May-95	26-May-95	Baku, Azerbaijan	Patricia Piironen, ED&T-427-4809; Norm Morrison, ED&T - 422-6236
Neftegaz-Bashkiriya'95	Oil processing, refining and distribution exhibition	29-May-95	02-Jun-95	Ufa, Russia	Patricia Piironen, ED&T-427-4809 (not participating)
National Oil Show	Tradeshow on petroleum equipment and services	Jun-95	Jun-95	Trinidad	Mark Spencer, ED&T - 427-4809
Incoming delegation	Oil and gas equipment for high pressure wells, sour gas applications, oil production and processing	Jun-95	Jun-95	Turkmenistan	Patricia Piironen, ED&T-427-4809
Incoming delegation	Oil and gas equipment for projects in Russia in relation to Moldova's agreement with LukOil	Jun-95	Jun-95	Moldova	Patricia Piironen, ED&T-427-4809
International Congress of Heavy Oil & Gas	Participants from 12 countries around the world	05-Jun-95	09-Jun-95	Quito, Ecuador	Mark Spencer, ED&T - 427-4809
NOIA Conference and Offshore NFLD Show & Maintenance Show	Oil&Gas	19-Jun-95	22-Jun-95	St. John's, NFLD	Susan Elliott, ED&T - 427-1905 John Jacobson, ED&T - 427-1905
InterCan '95 - Calgary Oil & Gas Tradeshow	Incoming international visitors to oil and gas Tradeshow and International Heavy Oil Symposium	19-Jun-95	22-Jun-95	Calgary, AB	Brian Westlund, Greg Whyte, Jim Armet, Don Chinski, ED&T - 427-4809

ACTIVITY CALENDAR: Energy and Oil and Gas Equipment and Services

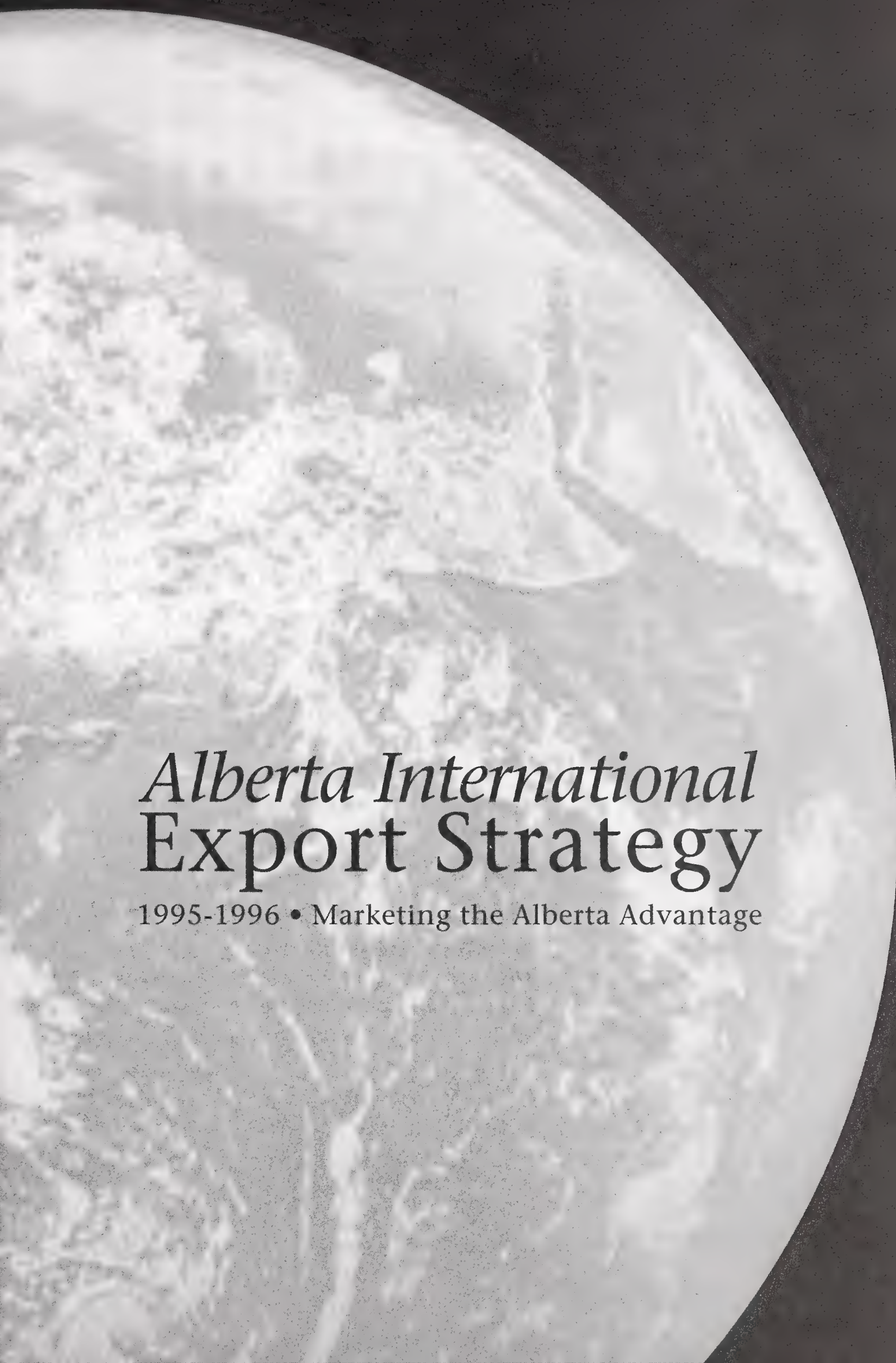
ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Oil & Gas Incoming Missions '95 (Intercan)	Oil & Gas Equipment and pipeline technology 1) Incoming delegations from Europe 2) Incoming delegations from S. Korea 3) Incoming delegations from India & Pakistan 4) Incoming delegations from China 5) Incoming missions from Malaysia, Indonesia & Vietnam	20-Jun-95	22-Jun-95	Calgary, AB	Show Manager - Heather Doyle, ED&T - 422-6236 1) Erv Lack, ED&T - 427-4809 2) Gerry Royer, ED&T - 427-4809 3) Greg Jardine, ED&T - 427-4327 4) Josephine Choi, ED&T-427-4809 5) Rabin Mendis, ED&T - 427-4809
Incoming delegation	Canadian Institute for Petroleum Development (CIPD) Summer Program	10-Jul-95	18-Aug-95	Poland, Romania & Ukraine	Don Wilson, ED&T - 427-4809
Malaysia Oil Show	Oil and gas show targeted toward the upstream and downstream Malaysian market	11-Jul-95	14-Jul-95	Kuala Lumpur, Malaysia	Rabin Mendis, ED&T - 427-4809
Petroleum Industry Show	Exhibition of petroleum equipment and services	11-Jul-95	14-Jul-95	Maracaibo, Venezuela	Mark Spencer, ED&T - 427-4809
Oil and Gas Mission	Mission to Africa	Sep-95	Sep-95	Nigeria, Angola & Cameroon	Dean Sanduga, ED&T - 427-4327
SPE Trade Show	Large oil and gas show in Texas	Sep-95	Sep-95	Dallas, TX	Don Chinski, ED&T - 427-4809
Offshore Europe	Largest oil and gas show in North Sea region	05-Sep-95	08-Sep-95	Aberdeen, Scotland	Heather Doyle, ED&T - 422-6236 Behrooz Sadre-Hashemi, ED&T - 427-4809
Outgoing mission	Oil and gas construction and environmental mission to Central and Eastern Europe	30-Sep-95	20-Oct-95	Czech Rep., Ukraine, Slovakia, Hungary & Bulgaria	Don Wilson, ED&T - 427-4809

ACTIVITY CALENDAR: Energy and Oil and Gas Equipment and Services

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Kazakhstan International Oil and Gas Exhibition KIOGE'95	International exhibition for the exploration, production, processing and distribution of oil and gas for onshore and offshore applications	Oct-95	Oct-95	Almaty, Kazakhstan	Patricia Piironen, ED&T-427-4809 (information only)
IMIQ'95	Conference and Trade Show by Mexican Chemical Engineers Association and PEMEX	Oct-95	Oct-95	Mexico	Brian Westlund, ED&T - 427-4809
Mission to Cuba	Outgoing matchmaking trade mission to Cuba	Oct-95	Nov-95	Havana, Cuba	Phil MacKinnon, ED&T - 427-4809
6th Colombian Petroleum Congress	Includes a comprehensive technical program and exhibits demonstrating equipment and services	03-Oct-95	06-Oct-95	Bogota, Colombia	Mark Spencer, ED&T - 427-4809
Oil & Gastech '95	In conjunction with trade mission to central & Eastern Europe	10-Oct-95	13-Oct-95	Kiev, Ukraine	Don Wilson, ED&T - 427-4809
Argentina Oil & Gas Expo'95	Important oil & gas exhibition taking place in conjunction with the Latin American Gas and Refining Congresses	16-Oct-95	20-Oct-95	Buenos Aires, Argentina	Greg Whyte, ED&T - 427-4809
SPE Annual Show	Society of Petroleum Engineers Show	22-Oct-95	25-Oct-95	Dallas, TX	Don Chinski, ED&T - 427-4809
Tyumen Oil and Gas International Trade Fair	Modern technologies in petroleum and gas industries, pipeline construction and maintenance	Nov-95	Nov-95	Tyumen, Russia	Patricia Piironen, ED&T-427-4809
Pacific Coast Oil & Gas Show and Conference	Oil Show focusing on oilfield equipment and services	08-Nov-95	10-Nov-95	Bakersfield, CA	Jim Armet, ED&T - 427-4809
Oil and Gas Equipment & Technology Trade Mission	Outgoing Mission	10-Nov-95	28-Nov-95	China	Josephine Choi, ED&T - 427-4809
Incoming delegation	Oil and gas and environmental mission	13-Nov-95	17-Nov-95	Romania	Don Wilson, ED&T - 427-4809
SPE Oil and Gas Equipment & Technology Exhibition '95	Outgoing Mission	13-Nov-95	16-Nov-95	Beijing, China	Norm Morrison, ED&T - 422-6236 Josephine Choi, ED&T - 427-4809

ACTIVITY CALENDAR: Energy and Oil and Gas Equipment and Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Indonesian Oil and Gas Show	Outgoing Mission	Dec-95	Dec-95	Jakarta, Indonesia	Rabin Mendis, ED&T - 427-4809
Mediterranean Oil and Gas Exhibition (MOEX) '96	Oil and gas trade show and mission	23-Jan-96	25-Jan-96	Malta	Anna Attademo, ED&T - 427-4809
American Energy Week	Various oil and gas related events including the Petro-Safe Trade Show	30-Jan-96	01-Feb-96	Houston, TX	Don Chinski, ED&T - 427-4809
Oil and Gas Mission	Mission to Africa	Feb-96	Mar-96	Algeria, Egypt, Ethiopia & Tunisia	Dean Sanduga, ED&T - 427-4327
International Control Engineering Expo/Conference	Industrial controls and technology	12-Mar-96	15-Mar-96	Chicago, IL	John Jacobson, ED&T - 427-1905

Environmental Industries and Services



Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Environmental Industries and Services

* ***In Alberta, the environmental sector consists of approximately 800 companies, employing about 8,000 workers and generating $600 to $700 million annually in revenue.***

* ***The world market for environmental products and services is estimated to grow from $300 billion in 1992 to $600 billion by the year 2000.***

* ***Alberta's competitive strengths in environmental processes, products and services provide a solid basis for growth opportunities in international markets, particularly in the U.S., Latin America, Europe, and Asia.***

Definition

The sector includes companies that provide services such as research, design, construction, servicing and implementation required for environmental conservation, protection, enhancement products, and services for municipalities, manufacturers and resource industries.

International Overview

The world market for the environmental industry, estimated to be just over $300 billion in 1992, is growing rapidly and may reach $600 billion by the year 2000. The U.S. market could reach $200 billion by that date. Canada's share of the world market for environmental products and services is presently estimated to be 3.5%. The primary export market for Canadian environmental goods and services is the U.S., which accounts for 80% of $1 billion in exports.

Canada's domestic market for environmental products and services is approximately $11 billion and is expected to grow at 10% annually to $22 billion by the year 2000.

The Canadian environmental industries and services sector comprises approximately 4,500 companies employing about 150,000 Canadians. Of these firms, between 15 and 20% are active exporters or are export-ready. An estimated two-thirds of the firms provide environmental services and one-third are involved in manufacturing products. (Source: A Strategy for the Canadian Environmental Industry, Industry Canada, Sept/94)

Alberta Position

In Alberta, the environmental sector consists of approximately 800 companies, employing about 8,000 workers, and generating $600 to $700 million annually in revenue. The focus is on providing services (70% of firms), rather than products. The majority of Alberta companies consist of six to eight employees and do less than $500,000 in annual sales. Of the four western provinces, Alberta has the most established environmental industry association, the 360-member Environmental Services Association of Alberta (ESAA).

Slightly over 60% of total environmental sales by Alberta companies were within the province. Sales derived from export activities to the following markets, expressed as a percentage of total revenues, were estimated to be:

Market	% of Total	Market	% of Total
Within Province	61.2	Western Europe	3.3
Western Provinces	13.8	Eastern Europe	0.2
Eastern Provinces	5.5	Pacific Rim	3.3
United States	12.6		

Overall, the sector is changing its orientation from environmental clean-up to the development of new processes and technologies to reduce environmental problems. The sector consists of four basic groups:

- Small entrepreneurs
- Consulting services
- Equipment suppliers
- Manufacturers of environmental products

The province's environmental sector has a number of competitive strengths:

- Alberta firms have developed a number of processes and products that are world competitive. Alberta strengths are in such areas as water/wastewater treatment, environmental effects monitoring, recycling, site remediation, hazardous waste collection and treatment, and laboratory services.

- Alberta business has also developed expertise in risk analysis, environmental impact assessments, environmental audits, and education and training.

- Alberta's expertise in environmental policies and regulatory processes can be exported and is being used to introduce Alberta companies into new export markets.

- Alberta has the only hazardous waste treatment facility in Western Canada. It acts as a catalyst in creating a substantial supporting industry within the province.

- The Alberta Research Council's joint research venture programs assist companies to acquire, develop and commercialize environmental technologies.

- The Alberta Environmental Centre provides applied research; technology development, demonstration and transfer; analytical and diagnostic services; and expert advice in support of the province's environmental sector.

- The Canadian Environmental Technology Advancement Corporation (CETAC), headquartered in Alberta with a network of offices in the western provinces, will assist Alberta companies in the application, development and commercialization of environmental technology for world markets.

Objective

To increase export sales of environmental products and services by Alberta-based businesses by:

- Increasing investment in Alberta's environmental sector.

- Increasing the development and acquisition of technology processes, services and products by Alberta-based firms.

- Providing market intelligence to enhance the linkage between research and development and commercial opportunities for environmental goods and services.

- Increasing the number of exporters and the export readiness of Alberta's environmental business sector.

- Enhancing growth and sustainability in existing markets and diversifying the market base.

Target Markets

The Canadian market is important to Alberta exporters, however, there are significant opportunities for growth in international markets, particularly in the United States, Latin America, Europe and Asia.

The Americas

Canada

- Much of the Canadian market consists of pollution control equipment, municipal investments in water, wastewater and solid waste control; and private sector expenditures, particularly in the pulp and paper, petroleum and metal industries.

- New environmental regulations are fueling much of the demand. For example, goods and services suppliers are averaging growth rates of 17% in a market valued at over $2 billion annually in Ontario.

- Less than one half of the domestic market is being filled by Canadian companies; the bulk is being supplied through imports (90% from the U.S.).

United States

- With expenditures of $125 billion in 1992, the U.S. is the major "foreign" export market for Alberta environmental firms.

- The solid waste management and resource recovery/recycling sectors of the U.S. market continue to grow steadily. A recent shift in expenditures toward integrated waste management and hazardous waste management, particularly to air pollution controls, is expected to continue.

Mexico

- There is significant potential for environmental products and services with the North American Free Trade Agreement (NAFTA) in place. Opportunities exist to export the environmental process (legislation, regulations, etc.) as well as products and services.

Latin/South America

- Significant potential may exist for Alberta's environmental services in these countries. Specific market opportunities will be explored.

Europe

Western Europe

- Alberta firms have 3.3% of their total sales in Western Europe. The direct sales potential is limited because of competition from leading innovators. However, opportunities for licensing technology and joint venturing may offer potential, especially in newer member countries of the European Community.

Eastern Europe

- This is an emerging market given the current state of the environment. Countries, such as Poland and the Czech Republic, have committed to environmental restoration but may require international funding to implement all components. This market has tremendous needs, and potentially includes Ukraine, Romania, Albania, and Slovakia.

Asia Pacific

- Countries such as South Korea, Taiwan, Hong Kong, Thailand, Singapore, Malaysia, and China have shown rapid economic growth, sometimes at the expense of the environment. Demand for protection and sustainability of the environment may enhance prospects for Alberta environmental firms.

- Developing countries, such as India and Vietnam, also offer potential but will require longer-term initiatives.

Middle East

- Significant opportunities exist in the Middle East in the treatment of water/waste water and cleaning up petroleum related areas.

Strategic Directions

Overall, the strategy for Alberta's environmental sector encompasses the following objectives and implementation strategies:

Objective - *attract investment in research, technology and product development*

Strategies:

- Improve the acquisition and development of new and innovative technologies by industry through technology transfer, electronic databases and networking.

- Enhance the "add-on" or value-added component of existing environmental goods and services.

- Ensure that government policies recognize and encourage the economic potential of the environmental services sector.

Objective - ***strengthen and expand research and development initiatives and activities that focus on commercialization of technology***

Strategy:

- Encourage research, development and technology commercialization activities in cooperation with the private sector via industry support mechanisms such as joint venturing.

Objective - ***improve quality and distribution of market intelligence and enhance export preparedness of Alberta companies***

Strategies:

- Develop and maintain networks for market information, sector trends and business sourcing.

- Identify and promote training and counselling in areas of export readiness such as management, marketing and cultural awareness.

Objective - ***identify opportunities and stimulate participation in international markets***

Strategies:

- Develop strategic alliances, partnerships and consortia to link up with national or international firms. In addition, utilize existing agencies, associations and organizations to meet this objective.

- Ensure industry partners have strength in developing markets and export promotion.

- Initiate development activities in emerging markets (Latin America, Eastern Europe, Asia).

- Facilitate contact with potential purchasers.

- Identify business opportunities and ensure that Alberta companies are aware of these opportunities.

- Facilitate the development of market-based opportunities through cooperative efforts with other government jurisdictions.

- Source financing by:

  - Identifying projects financed by International Funding Institutions (IFI's), such as, World Bank, Asian Development Bank, InterAmerican Bank;

  - Identifying project financing through non-conventional sources (CIDA, EDC, CCC); and

  - Identifying, assisting and sourcing conventional financing investment and lending institutions.

Objective - ***raise awareness of Alberta's environmental capabilities***

Strategies:

- Maintain current industry profiles.

- Focus on sectors in which Alberta has strengths (water/wastewater treatment, environmental effects monitoring, recycling, site remediation, hazardous waste collection and treatment and laboratory services).

- Market Alberta's environmental decision making and management skills including expertise in environmental protection applications, standards, environmental policies and regulatory processes.

Objective - ***facilitate initiatives that improve access to specific markets***

Strategy:

- Focus marketing on activities in priority markets (Canada, the U.S., Latin America, Western Europe, Asia Pacific) and allocate the necessary resources to these markets.

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

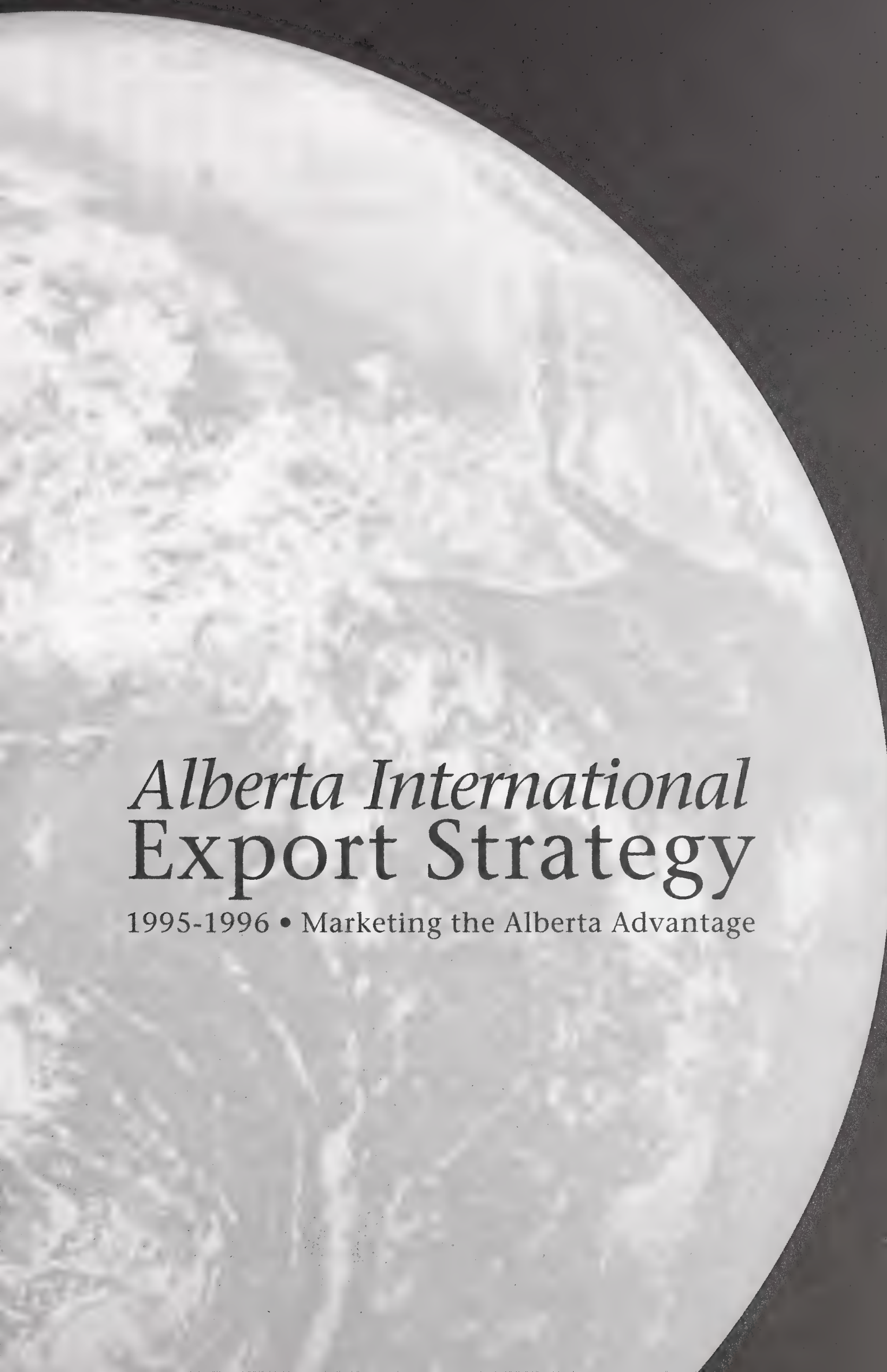
ACTIVITY CALENDAR: Environmental Industries and Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
META - Hazmacom	Environmental show; Manufacturing Expertise/Technology Awareness	Apr-95	Apr-95	California	Norm Jede, Economic Development & Tourism (ED&T) - 427-2005
Waste Expo '95	Hazardous Waste disposal & collection	01-Apr-95	28-Apr-95	Chicago, IL	John Jacobson, ED&T - 427-1905
New Exporters to Border States Mission	Environmental companies	Apr-95	Approx. date	Boston, MA	John Jacobson, ED&T - 427-1905
Enviro-pro, Tecomex'95	Environmental show	25-Apr-95	29-Apr-95	Mexico City, Mexico	Brian Westlund, ED&T - 427-4809
Waste Expo '95	Environmental trade show	26-Apr-95	28-Apr-95	Chicago, IL	John Jacobson, ED&T - 427-1905
Outgoing mission	Assess environmental opportunities	May-95	May-95	East Europe	Don Wilson, ED&T - 427-4809
Outgoing mission	Evaluate environmental opportunities	May-95	May-95	California, Arizona	Jim Armet, ED&T - 427-4809
Pacific Basin Conference	Hazardous Waste	May-95	May-95	Edmonton, AB	Paul Layte, Environmental Centre, 640-8408
New England Environmental Expo	Trade Show	01-May-95	11-May-95	Boston, MA	John Jacobson, ED&T - 427-1905
Environmental Market Study - U.S. Dept. of Energy sites	Study of business opportunities at Hanford and the Idaho National Engineering Laboratory for Alberta environmental firms	May-95	Ongoing		Chris Makowski, ED&T - 427-4323
Toronto Environmental Trade Show and Conference	Environmental trade show, conference	09-May-95	10-May-95	Toronto, ON	John Jacobson, ED&T - 427-1905
New England Enviro. Expo	Environmental trade show	09-May-95	11-May-95	Boston, MA	John Jacobson, ED&T - 427-1905
Technomart - High Technology Exhibition TAJEON	Mission to Korea	19-May-95	May	Korea	Gerry Royer, ED&T - 427-4809
META - Envitec	Environmental show; Manufacturing Expertise/Technology Awareness	Jun-95	Jun-95	Germany	Norm Jede, ED&T - 427-2005
Taipei Int'l Environmental Protection Show	Canada Information Booth	Jul-95	Jul-95	Taipei	Jay Tam, ED&T - 427-4809
Solid Waste Association	Environmental show	Aug-95	Aug-95	California	Jim Armet, ED&T - 427-4809
Solid Waste Association	Environmental show	Aug-95	Aug-95	Texas	Don Chinski, ED&T - 427-4809

ACTIVITY CALENDAR: Environmental Industries and Services

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Dioxins'95	Environmental symposium	Aug-95	Aug-95	Edmonton, AB	Paul Layte, Environmental Centre, 640-8408
Tri-Cities Plant Engineering and Maintenance Show (TriCiPE)	Alberta environmental companies meet with prime contractors at the Hanford Nuclear Site environmental restoration	Aug-95	Aug-95	Richland, WA	Chris Makowski, ED&T - 427-4323
Environment Trade Show & Mission to China	Outgoing Mission	Sep-95	Sep-95	China	Josephine Choi, ED&T - 427-4809
Korea Air Pollution/ Waste Water/ Ground Water Treatment Mission	Incoming Buyers	Sep-95	Sep-95	Alberta	Gerry Royer, ED&T - 427-4809
Developing Marketing Strategies	Training Business	Sep-95	Sep-95	Edmonton/Calgary, AB	Norm Jede, ED&T - 427-2005
Petrotech	Petroleum/ Environmental show	Sep-95	Sep-95	New Delhi, India	Greg Jardine, ED&T - 427-4327
Outgoing mission	Environmental Show	Sep-95	Sep-95	Beijing, China	Josephine Choi, ED&T - 427-4809
Incoming mission	Korea air/water pollution industry	Sep-95	Sep-95	Alberta	Gerry Royer, ED&T - 427-4809
Eco Expo	Environmental	Sep-95	Approx. date	Boston, MA	John Jacobson, ED&T - 427-1905
American Public Works	Gov't/Procurement	Sep-95	Approx. date	Chicago, IL	John Jacobson, ED&T - 427-1905
Society of Military Engineers Conference and Trade Show	Environmental firms meet with U.S. Dept. of Defense to market products and services for remediation of over 200 sites in AK	Sep-95		Anchorage, AK	Chris Makowski, ED&T - 427-4323
Reverse NEBS - Environmental Products/Services	Export training for environmental services/products companies interested in selling into the U.S.	Sep-95	Sep-95	Alberta	Christopher Makowski, ED&T - 427-4323
Pollutec	Environmental show	Oct-95	Oct-95	France	Bob Tunis, ED&T - 427-4809
Southwest Hazardous Waste Materials Show	Harzardous Waste Handling	Oct-95	Oct-95	Texas	Don Chinski, ED&T - 427-4809
IMIQ'95	Conference and Trade show	Oct-95	Oct-95	Mexico	Brian Westlund, ED&T - 427-4809
Water Environment Federation	Municipal & Industrial Wastewater Treatment & disposal	01-Oct-95	25-Oct-95	Miami, FL	John Jacobson, ED&T - 427-1905
Outgoing mission	Environmental Mission	Oct-95	Oct-95	Norway, Sweden, Finland, Denmark	Behrooz Sadre-Hashemi, ED&T - 427-4809

ACTIVITY CALENDAR: Environmental Industries and Services					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Incoming Environmental Mission	Incoming Mission from Hong Kong	Oct-95	Oct-95	Alberta	Joe So, ED&T - 427-4809
Water Enviro. Federation	Environmental	23-Oct-95	25-Oct-95	Miami, FL	John Jacobson, ED&T - 427-1905
Incoming Mission to Calgary Environmental Trade Show and Conference	Incoming mission from Pacific Northwest US to meet with Alberta environmental companies	30-Oct-95	01-Nov-95	Calgary, AB	Chris Makowski, ED&T - 427-4323
Outgoing mission	Assess environmental opportunities	Nov-95	Nov-95	Colombia/Ecuador	Greg Whyte, ED&T - 427-4809
Hazmat West - META	Environment show; Manufacturing Expertise/Technology Awareness Program	Nov-95	Nov-95	California	Jim Armet, ED&T - 427-4809
Incoming delegation	Environmental mission	Nov-95	Nov-95	Romania	Don Wilson, ED&T - 427-4809
Canada Environment Show	Environmental show	Dec-95	Dec-95	Mexico City	Brian Westlund, ED&T - 427-4809
Environmental Forum	Training business	Jan-96	Jan-96	Calgary, AB	Norm Jede, ED&T - 427-2005
PetroSafe	Trade Show	30-Jan-96	01-Feb-96	Houston, TX	Don Chinski, ED&T - 427-4809
Canadian Environmental Expo	Environmental Trade show	Mar-96	Mar-96	Toronto, ON	John Jacobson, ED&T - 427-1905
USA Dept. Of Energy "Partnering" Mission	Firms targeting U.S. DOE sites to meet with U.S. environmental companies interested in partnering with Canadian firms	Mar-96		Seattle, WA	Chris Makowski, ED&T - 427-4323
GLOBE '96 Environmental Trade Fair and Conference	International trade show and conference sponsored by Asia-Pacific Foundation of Canada; incoming buying delegations from Asia Pacific, Latin America and Europe	25-Mar-96	29-Mar-96	Vancouver, BC	Chris Makowski, ED&T - 427-4323 Heather Doyle, ED&T - 422-6236 Erv Lack, ED&T - 427-4809 Jay Tam, ED&T - 427-4809 Gerry Royer, ED&T - 427-4809

Forest and Building Products



Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Forest and Building Products

* ***Forest and building products is the fourth largest primary economic sector in Alberta behind energy, agriculture and tourism. Shipments for 1993 were estimated to be in the range of $3 billion and are expected to exceed $4 billion by 1996. Exports currently account for an estimated $1.7 billion.***

* ***Recent estimates place direct employment in Alberta's primary and secondary forest industries at 19,500, with direct and indirect employment at 48,750.***

* ***Almost $4 billion in new investment has occurred in the forest products sector since 1986. As a result, Alberta has seen a major increase in the production of pulp, newsprint, oriented strandboard (OSB) and medium density fibreboard (MDF). Forestry projects currently under construction total $365 million.***

* ***Another $3 billion to $4 billion in new forestry-related investment could be initiated over the next four years. This includes investments in pulp and paper, panelboard, laminated veneer lumber and higher-value-added/specialty wood product manufacturing facilities. Most of the additional production resulting from these investments will be exported, which emphasizes the need to improve access to international markets.***

Definition

This sector includes forestry, building materials, equipment and supplies. It can be divided into four major industry groups:

- **Pulp and paper** - 10 pulp and paper mills producing over 2 million tonnes annually for markets in the U.S., Asia Pacific and Europe from a mix of new and recycled fibre.
- **Wood and panelboard** - 350 producers of dimension and specialty lumber, engineered building products and panelboard that in 1995-96 will manufacture $1.2 billion in products - 60% to 75% exported to markets in the U.S., Asia Pacific and Western Europe.

- **Value-added wood and non-wood building products** - 600 secondary wood product manufacturers and 200 non-wood building product suppliers with shipments estimated at $800 million destined largely for Canadian and U.S. markets. Exports are also growing to the Asia-Pacific region.

- **Related machinery, equipment, supplies and services** - It is estimated that Alberta's forest products industry spends $1.5 billion a year for its ongoing procurement requirements. The Forest Industry Suppliers Association of Alberta represents over 280 suppliers.

Overall, the sector is competitive, modern and environmentally advanced. Local markets are served efficiently and the prospects for increased exports are high. There is innovation and investment by "primary" manufacturers in new products and markets. The variety of secondary wood and non-wood building products manufactured in Alberta is increasing, as is the capacity of the Alberta service industry to provide equipment, supplies and services to the sector.

In developing this strategy, consultations were held with the following organizations on the strategic directions to be undertaken:

- Alberta Forest Products Association (AFPA)

- Forest Industry Suppliers Association of Alberta (FISAA)

- Wood Manufacturing Council of Alberta (WMCA)

Contact was also made with the Northern and Southern Chapters of the Architectural Woodwork Manufacturers Association of Alberta to provide input.

International Overview

In 1994, the improvement in the U.S. and Canadian economies and the drop in the exchange rate for the Canadian dollar relative to the U.S. currency proved beneficial to many manufacturers of forest and building products. Stronger economic growth is adding to improved prospects in offshore markets for 1995-96 - particularly Japan and the European Union. Recovery from a series of natural disasters, including the Kobe/Osaka earthquake and floods in Western Europe, will also increase demand for building materials and pre-fabricated housing.

Relatively strong prices are expected to continue for most products. Pulp prices have shown a dramatic recovery since reaching a cyclical low in the fourth quarter of 1993. The medium-term outlook remains positive, although there will be a substantial volume of new capacity coming on stream between 1995 and 1998. Softwood lumber markets should also remain profitable, although average prices will be below 1994 levels. Panelboard demand is strong; however, new capacity is expected to result in stronger competitive pricing. Export markets for value-added lumber and wood products will also present opportunities for growth.

The outlook for the non-wood building products industry is closely linked to general economic performance and to residential and commercial construction activity. For the forest products industry service and supply sector, strength in commodity markets will bring several good years of activity. Opportunities are diverse - in all four industry groups.

Alberta Position

Alberta manufacturers of pulp and paper, lumber and panelboard are highly efficient - due to recent investments, modern technology and a favourable business climate and infrastructure. The province's resources produce quality products - pulp with high brightness and strength, making it ideally suited to producing a wide range of paper products; and lumber that is preferred by home builders and millwork firms in North America and overseas.

Over the next few years, growth should continue with pulp and paper producers expanding capacity and considering moving into value-added products, such as fine paper. There is a solid base of producers of "value-added" lumber and engineered wood products in the province. Two new world-class OSB mills will come on line and Alberta's existing MDF mill will complete an expansion - all in 1995-96. This will further enhance Alberta's position as a major producer of panelboard and other related products. In addition, Alberta's first laminated veneer lumber (LVL) mill is expected to be fully operational by 1996.

Challenges faced by the industry include maintaining competitiveness, responding to growing environmental awareness, and addressing restrictive trade practices. Lumber and panel products are differentiating - customers demand and pay for custom treatment. For these producers, substitution, market information, sales networks and customer contact are important.

Alberta building products are of equal or superior quality to those manufactured in the U.S. or elsewhere in the world. Price and service often determine whether or not Alberta companies establish export footholds. Production capabilities in windows, doors, moldings, stairs, architectural and commercial millwork, solid wood components, overhead doors and counter tops are continuing to increase. Challenges relate to stabilizing sources of lumber supply and in marketing, which includes addressing increasing demand, changing distribution systems and developing new trade alliances and partnerships.

The rapid growth of Alberta's forest products industry has created interest and recognition that Alberta has extensive capacity and expertise for servicing the forest sector in Western Canada and the U.S. Pacific Northwest. Partnerships and strategic alliances among suppliers, and with original equipment manufacturers and forest product companies, will be required to take advantage of emerging opportunities.

Strategic Directions

Adding value to Alberta's resource base is a priority. Over the coming years, attracting investment in value-added manufacturing of Alberta timber resources and the utilization of wood residues in products like particle board or medium density fibreboard will be important. Strong markets and recovering economies provide an opportunity for investment. Export and domestic markets will create opportunities for producers of value-added lumber and paper products. Import substitution is possible for some Alberta manufacturers.

Environmental issues are important for the industry. Alberta producers of pulp and paper, wood and panelboard are responding proactively to environmental pressures. New and innovative environmental technologies are being used successfully in mills. The industry's commitment to continuous improvement of forest management practices - through initiatives such as the Alberta Forest Products Association (AFPA) *ForestCare*® program - is also significant.

The Alberta International Export Strategy for Forest and Building Products is structured around seven strategic themes which will characterize government/ industry activities and overall cooperation in the sector:

- **Promoting environmental leadership.** Environmental issues remain at or near the top in priority for both pulp and paper, and the wood and panelboard industries. Key issues include the sustainability of forest management practices, the use of recycled fibre, concerns over effluent emissions, and the overall image of the Alberta/ Canadian forest industry in major markets such as the European Union and U.S.

- **Enhancing export readiness.** Assisting small and medium-sized Alberta producers of value-added wood and non-wood building products as they prepare to compete in export markets. This involves the provision of market intelligence, counselling and, for some firms, participation in targeted trade shows and incoming and outgoing market and technical awareness missions.

- **Securing and expanding market access.** Removing tariff and non-tariff barriers and diversifying into new markets. This includes working with companies to obtain necessary regulatory/code approvals and continuing work toward recognized market quality standards for production and environmental performance. The threat of U.S. countervail continues to be a major concern requiring strong coordination between government and industry

- **Providing a competitive economic and regulatory structure.** Working toward a policy and regulatory framework that will ensure Alberta's industry remains both economically competitive and environmentally responsible. Transportation issues are a key priority for the forest products industry. There is concern about the possible restructuring of the Canadian rail industry and the lack of price and service competitiveness.

- **Strengthening competitive advantages.** A continued priority on research and development, training and technology transfer. This includes, among other initiatives, supporting research partnerships in pulp and oriented strandboard (OSB), organizing technology missions, sponsoring technical seminars or conferences, encouraging technology networks and publishing research findings.

- **Focusing on priority export markets.** Continued support of overseas market development for lumber, panelboard and value-added wood and non-wood building products in Europe and Asia Pacific. Other niche markets (e.g., low-cost housing) that may exhibit potential for specific companies can be found in areas such as Eastern Europe, the Middle East, India, South America and Africa.

- **Supporting strategic alliances.** Placing increased emphasis on cooperative approaches to market development where, for example, several manufacturers might supply components for one complete package suitable to a specific market (e.g., pre-fabricated homes).

The following table summarizes the strategic directions for each of the four industry groups, along with their priority markets.

Table 1
Summary of strategic directions

Product Category	Priority Markets	Strategic Directions
Pulp and Paper		
Softwood and hardwood BKP (pulp)	U.S., Japan, Western Europe, Korea	• Promote awareness in key export markets of Alberta's environmental and forest management record (build a positive image).
Softwood and hardwood BCTMP (pulp)	U.S., Western Europe, Asia-Pacific	• Assist in the development of internationally accepted standards and guidelines for forest management - ISO 14000 and CSA initiatives.
Newsprint	Canada, U.S.	• Secure and expand market access by eliminating trade and regulatory barriers - e.g., resolving Canadian and U.S. rules which limit the use of BCTMP in fine papers.
Paperboard and building paper	Alberta, Western Canada and U.S.	• Encourage investments and cooperate on feasibility studies that lead to the production of paper in Alberta.
		• Work with industry to articulate concerns related to the competitiveness of rail transport.
		• Promote utilization of agricultural fibre in pulp and panelboard applications.
		• Facilitate cooperative R&D on enhancing pulp and paper processes and overall competitiveness.
		• Strengthen strategic alliances with the Pulp and Paper Research Institute of Canada.
		• Sponsor training and technology transfer through seminars, conferences and networks.
Wood and Panelboard		
Softwood lumber	Canada, U.S., Japan and Europe	• Expand markets through cooperative initiatives that address trade barriers and restrictive trade practices.
		• Coordinate Alberta's involvement in efforts related to U.S. countervail on forest products.
Structural panels	Canada, U.S., Japan	• Work with industry to articulate concerns related to the competitiveness of rail transport.
Particle board, MDF	U.S., Asia-Pacific	• Facilitate R&D on improved wood fibre recovery, residue utilization and new product development based on Alberta's fibre mix.
Value-added lumber products	Alberta, Japan, U.S.	• Strengthen alliances with Forintek, the Structural Board Association of Canada, and the ongoing OSB/panelboard R&D partnership at the Alberta Research Council.
		• Organize technology missions and demonstration workshops - technology transfer.
		• Support to industry/government environmental initiatives - for example, ForestCare® and the Alberta Forest Conservation Strategy.
		• Collect and distribute market intelligence.

Table 1
Summary of strategic directions (continued)

Product Category	Priority Markets	Strategic Directions
Value-Added Wood and Non-Wood Building Products		• Assist in the formation of an umbrella organization for the value-added wood products industry. • Explore markets for pre-packaged housing units as a vehicle for selling Alberta primary and secondary products and expertise. • Promote export readiness through business planning, market intelligence and market/ technical awareness missions and trade shows. • Encourage flexible networks that enable Alberta companies to pool expertise and build marketing alliances. • Develop a strategy for value-added wood products in cooperation with industry. • Strengthen alliances with Forintek and other R&D organizations. • Enhance workforce training in wood products manufacturing, management and marketing skills. • Undertake a scoping study of the non-wood building products industry to better define capabilities and priorities. • Follow-up on recovery plans to rebuild areas affected by the Kobe/Osaka earthquake.
Secondary wood products	Canada, U.S., Asia-Pacific	
Landscaping products	Alberta, B.C., U.S. Pacific Northwest	
Mechanical and electrical	Alberta	
Pre-fabricated homes	Western Canada, Japan, U.S. Pacific Northwest	
Non-wood building products	Alberta, B.C., U.S. Pacific Northwest, Asia-Pacific	
Potential markets	Mexico, Middle East, Eastern Europe, Russia, Africa, South America	
Related Supplies and Services		• Work with the Forest Industry Suppliers Association of Alberta to identify supply and manufacturing opportunities. • Support industry-driven Alberta trade shows and incoming missions which showcase Alberta supply capabilities. • Encourage forest product manufacturers to examine new technology/supplier relationships. • Organize outgoing market/technical awareness missions and gathering of market intelligence. • Facilitate strategic relationships with original equipment manufacturers. • Assist prototype development and field trials of forestry machinery and equipment. • Support the Alberta Research Council in "lateral" technology transfer (e.g. from oil and gas) to forest and building products. • Strengthen alliances with the Forest Engineering Research Institute of Canada, the National Research Council and other research organizations. • Encourage market development with priorities in domestic markets and new opportunities in the U.S. Pacific Northwest.
Suppliers of plant machinery, equipment	Alberta, B.C., Saskatchewan, U.S. Pacific Northwest	
Transportation and distribution	Alberta, B.C., Saskatchewan, U.S. Pacific Northwest	
Consulting, environmental engineering, technical and scientific support services	Alberta, B.C., Saskatchewan, U.S. Pacific Northwest, Mexico	
Forest management and technology services	Alberta, B.C., Saskatchewan, U.S. Pacific Northwest, Mexico, South America, Eastern Europe	

Implementation Plan

Alberta Economic Development and Tourism, in cooperation with the forest and building products sector, will be undertaking a range of activities designed to meet the strategic directions identified in Table 1. The activities can be thought of in three general categories. A brief description and highlights of the activities in each category follows.

1. **Market awareness, access and preparation**

   Part of the infrastructure available to the industry are a number of services offered by Economic Development and Tourism either directly or through government/industry partnerships. These services include:

   - **Clearinghouse for technical and business information** - provides access to market and business intelligence, technical assistance and information on possible sources of venture financing and market development support.

   - **Export readiness** - provides support to small and medium-sized businesses in preparing to enter new export markets or who are first-time exporters. Services include counselling on how to do business in export markets, information on market and regulatory requirements, and assistance in partnering with other companies and putting in place a market development strategy.

   - **Competitiveness** - provides assistance to small and medium-sized businesses to help develop improved capabilities in marketing, management, technology transfer and training. Examples of activities include technology demonstration workshops, management and technical audits, and assistance in the development of cooperative networks.

   - **Environmental image** - represents Alberta on intergovernmental/industry initiatives in key international markets that protect access and promote Alberta's reputation for sound forest and environmental management practices. Specific examples are:

     – A proactive International Communications Program through the Canadian Council of Forestry Ministers (CCFM).

     – Efforts to develop internationally accepted protocols for environmental and forestry audits - programs such as the ISO 14000 Certification and the CSA Forest Management Audit.

Several activities are also planned by government, in partnership with industry, that are intended to increase awareness of new and emerging market development opportunities. These include:

- Sponsor a review of purchasing interests expressed by Western Building Materials Association (WBMA) members - 450 lumberyards and hardware retailers in Washington, Oregon, Idaho, Montana and Alaska. An incoming mission of selected WBMA members interested in sourcing Alberta building products will be coordinated in a second stage of the project.

- Follow-up on Hashimoto Boles study of the Japanese housing market and the potential for Alberta building products. This will include giving consideration to the recommendations in the report for expanding exports of Alberta forest and building products to Japan.

- Explore opportunities and vehicles for marketing Alberta wood and non-wood building products in the Asia Pacific market, such as pre-packaged housing consortia or joint marketing initiatives such as Canada Comfort Direct.

- Undertake a scoping study of Alberta's non-wood building products sector to better define capabilities, strengths, opportunities and other attributes. The study will be done

in cooperation and consultation with industry.

- Do a joint review with the Forest Industry Suppliers Association of Alberta of the economic contributions, service requirements and future growth opportunities for this industry group. The goal is to scope the strengths and capabilities of the sector and better position Alberta suppliers to take advantage of emerging opportunities.

- Evaluate the long-term opportunities for manufacturing various types of forest industry machinery and equipment and identify key factors to encourage industry expansion in Alberta.

- Initiate a joint review with the Environmental Services Association of Alberta of forestry-related business opportunities in Western Canada, the U.S. Pacific Northwest and the U.S. Upper Midwest for Alberta environmental equipment/service companies. In a second phase, an incoming mission of selected mill managers/purchasing personnel from mills in the U.S. Pacific Northwest is planned.

- Identify business opportunities in the U.S. Pacific Northwest pulp and paper sector that may arise from the need to retrofit or rebuild existing mills - particularly in regard to environmental equipment and the need to meet new regulatory requirements.

- Assess chemical requirements of manufacturers in the forest products sector and identify possible new business development opportunities. This would be a strategic review aimed at identifying key barriers to growth, as well as potential investment/business opportunities.

- Take steps, in cooperation with the federal government, to improve the reliability, accuracy and timeliness of market and business information. This will assist industry in identifying and following up on opportunities and government in being able to track and to measure performance.

2. Strategic alliances and partnerships

The setting and coordination of sector priorities and direction is achieved through several strategic alliances and with direct input from industry. For example:

- The Cooperative Overseas Market Development Program (COMDP) coordinates regulatory and market access initiatives for solid wood products and consists of government (federal/Alberta/B.C.) and industry.

- The Wood Panel Bureau Alliance addresses market development activities for OSB, particle board, MDF and hardwood plywood. It consists of the Structural Board Association, Canadian Particleboard Association, Canadian Hardwood Plywood Association, the federal government, the provinces (Alberta, Ontario and Quebec) and industry.

  Alberta has recently entered into a three-year Wood Panel Market Development Program involving the federal government, Ontario, Quebec and the OSB industry (led by the Structural Board Association). A prominent goal for 1995-96 is to improve access to U.S., European and Asia-Pacific markets for Alberta and Canadian wood panel manufacturers.

- The Alberta Forest Research Advisory Council (AFRAC) sets R&D priorities for the forest industry in Alberta. There are 20 members drawn from government (federal/Alberta), the Alberta Research Council (ARC), University of Alberta, Forest Engineering Research Institute of Canada (FERIC), Forintek, Pulp and Paper Research Institute of Canada (PAPRICAN), Alberta Forest Products Association and industry.

- The Alberta CTMP Consortium deals with mechanical pulp and paper R&D and consists of members from the Forest Industry Development Branch, ARC and the three producers in the province.

- The Pulp Mill Process Control Partnership focuses on the application of artificial intelligence systems to improve process control in manufacturing pulp and consists of the University of Alberta, industry and the Forest Industry Development Branch.

- Forintek is Canada's national wood products laboratory and has 163 members from industry, the federal government, the provinces and various research agencies. The Alberta Forest Products Association (AFPA) and the Forest Industry Development Branch sit on the Board of Directors. Members have access to the results from the entire program.

3. **Priority market development activities**

A number of direct market development initiatives are planned or proposed. These are summarized in the Activity Calendar and include:

- Outgoing trade and technical missions.

- Seminars and workshops.

- Alberta trade shows and major incoming missions.

There are a number of other events listed which are presented for information only. Further details on these and other events in various geographic markets are available on request from the Tourism, Trade and Investment Division (427-4809) or the Forest Industry Development Branch (422-7011).

Performance indicators

The future success of Alberta's forest and building products sector will ultimately depend on its ability to compete internationally - providing service and quality in value-added products. Government's role in achieving competitiveness will continue to be that of a catalyst for business - helping to identify new areas of opportunity, facilitating technology transfer and industry-led research and development, enhancing market access and helping companies achieve export readiness.

The success of the Alberta International Export Strategy will be measured relative to the implementation of the strategic directions identified in Table 1. These strategic directions, once implemented, will contribute to improved performance of the forest and building products sector as measured by the indicators and targets shown below.

Note: there are serious discrepancies with the data reported by Statistics Canada. For example, Statistics Canada reports Alberta forest product exports at $900 million for 1992, while other estimates (Alberta Economic Development and Tourism/Price Waterhouse) are in the range of $1.7 billion. The base estimates used for deriving the following targets are from the 1994 Price Waterhouse study titled *Review of the Economic Impact of the Forest Industry in Alberta*.

Indicators and targets*
• Value of shipments - expected to exceed $4 billion in 1996. • Value of exports - expected to reach $2.5 billion in 1996. • Employment - expected to reach 21,500 in 1996. • Number of exporters - target of adding 100 new exporters by 1998. • New investment - $3 to $4 billion to be initiated by 1998. • Value added to Alberta's forest resources - increase the number of jobs per thousand m^3 of timber harvested to 1.4 by 1998.

*Derived from the 1994 Price Waterhouse study *Review of the Economic Impact of the Forest Industry in Alberta.*

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Forest and Building Products

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Priority Market Development Activities					
A. Outgoing Trade and Technical Missions					
Building Products/Housing Mission to Japan	Market and technical awareness mission focusing on 2 x 4 wood frame housing technologies and associated building products	May-95	Jun-95	Tokyo/Osaka, Japan	Barry Salter, Economic Development & Tourism (ED&T) - 427-4809 Shane Pospisil, ED&T - 422-7011
Wood Manufacturing Expertise Mission to Interzum Supply Fair and Ligna Machinery Show	World's largest wood products supply and machinery show, also mission to leading, wood-manufacturing operations in Germany and Denmark; Manufacturing Expertise/Technology Awareness Program	19-May-95	27-May-95	Cologne/Hanover, Germany	Horst Ramanauskas, ED&T - 422-7011
National Hardware Show/Building Expo	Annual marketplace for hardware and building products	13-Aug-95	16-Aug-95	Chicago, IL	Matt Collins, ED&T - 427-1905
Building Products/Housing Mission to Japan	Market and technical awareness mission focusing on 2x4 wood frame housing technologies and associated building products	Sep-95		Tokyo/Hokkaido, Japan	Barry Salter, ED&T - 427-4809 Shane Pospisil, ED&T - 422-7011
3rd Takugin Bank 2x4 Housing Seminar	Mission and seminar (Alberta private sector and Alberta Tokyo Office) to profile building products to the bank's building clients; sales calls to potential small and medium-sized buyers/builders	Fall-95		Hokkaido, Japan	Barry Salter, ED&T - 427-4809

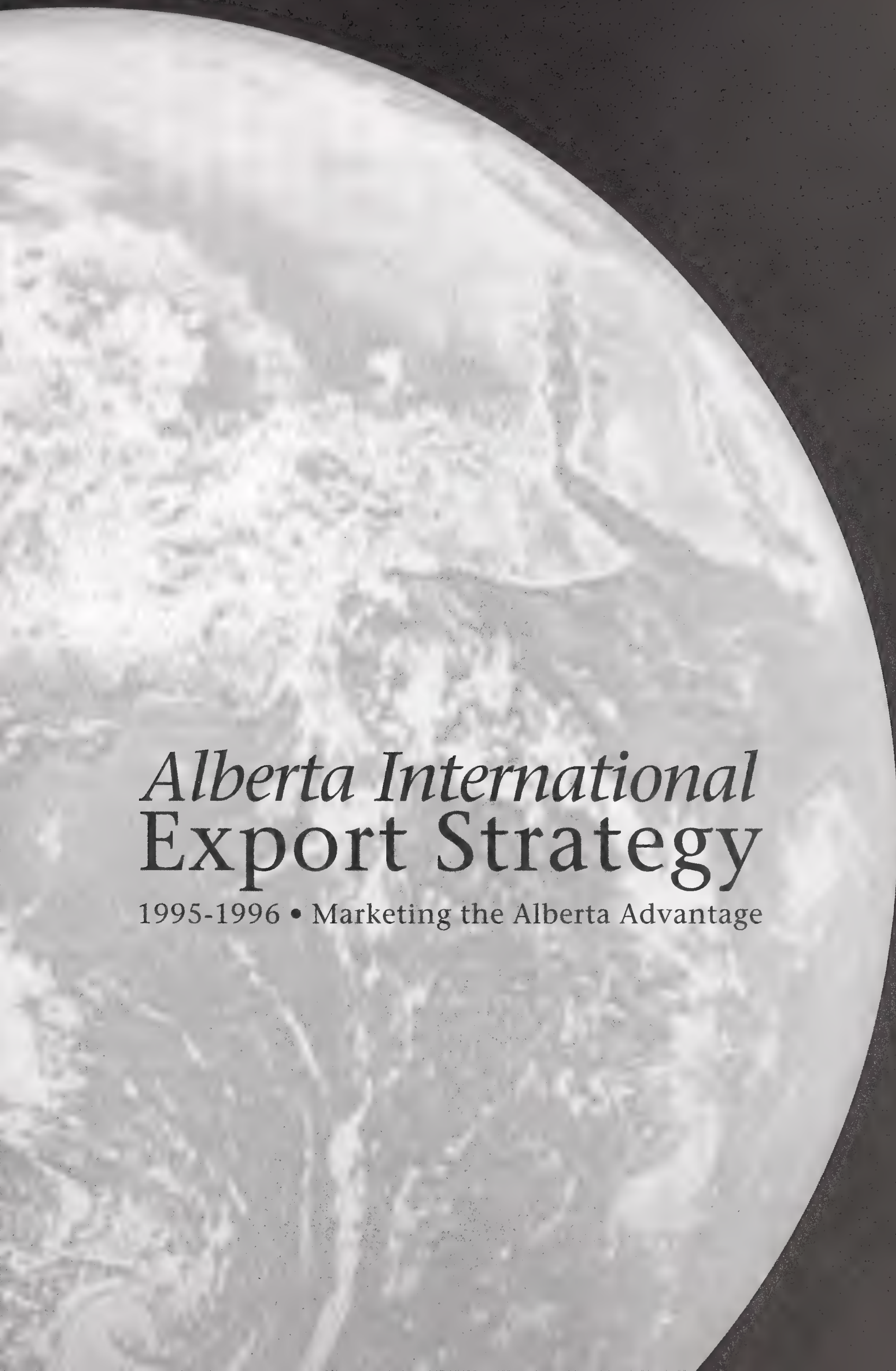
ACTIVITY CALENDAR: Forest and Building Products					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Forest industry supplier mission to EXFOR '96	Marketplace for equipment, supplies and services in Canadian, U.S. and European pulp and paper industry	Jan-96		Montreal, PQ	Shane Pospisil, ED&T - 422-7011 Darryl Martin, ED&T - 427-2005
National Association of Home Builders - 1996 "Builders Show"	Annual conference and show for the U.S. residential home builders	Jan-96		Houston, TX	Horst Ramanauskas, ED&T - 422-7011
Ideas Show	Trade show, range of innovative building products and services	06-Feb-96	08-Feb-96	Toronto, ON	Matt Collins, ED&T - 427-1905
Canadian Hardware Show	Annual marketplace for domestic manufacturers of hardware and building supplies	08-Feb-96	10-Feb-96	Toronto, ON	Matt Collins, ED&T - 427-1905
Wood Technology Clinic and Show	Leading forest industry show and conference on machinery for sawmilling and the wood remanufacturing industries; Manufacturing Expertise/ Technology Awareness Program	Mar-96		Portland, OR	Horst Ramanauskas, ED&T - 422-7011
B. Seminars and Workshops					
Seminar on markets in the U.S. for hardware and building products	Strategic 5-year outlook of the home centre industry. Guest speaker Wyatt Kash, publisher of the National Home Centre News, NY	24-May-95 25-May-95		Edmonton, AB Calgary, AB	Matt Collins, ED&T - 427-1905
Technology demonstration workshop	Workshop and seminar to provide the forest products industry with modern manufacturing technology and machinery	Sep-95		Edmonton/Calgary, AB	Horst Ramanauskas, ED&T - 422-7011
Trading House Seminar	Guest speakers from Japan/Asia markets to speak on building product opportunities; meet one-on-one with companies interested in marketing to Japan	05-Dec-95		Calgary, AB	Barry Salter, ED&T - 427-4809

ACTIVITY CALENDAR: Forest and Building Products

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
C. Alberta Trade Shows and Major Incoming Missions					
Northern Alberta Forestry Show	Seminar and trade show focused on harvesting and silviculture aspects of the forest industry and opportunities for Alberta forest industry suppliers	04-May-95	06-May-95	Grande Prairie, AB	John Fraser, Evergreen Park - 532-3729
Meetings with Hokkaido visitors in Edmonton	Marketing meetings and celebration of the 15th anniversary of the Alberta/Hokkaido twinning	Jul-95	Jul-95	Edmonton/Calgary, AB	Barry Salter, ED&T - 427-4809
Alberta International Forestry Show	Brings forest industry companies together with forest industry suppliers; opportunity for suppliers to demonstrate products and services	20-Sep-95	22-Sep-95	Edmonton, AB	Rick O'Neill, Dominion Trade Show Management - 436-8000
Whitecourt Reverse Trade Show	Alberta's forestry producers identify opportunities for forest industry suppliers	01-Nov-95		Whitecourt, AB	Michael Walker, Chamber of Commerce - 778-5363
Incoming mission of Western Building Materials Association (WBMA) members	Matching WBMA companies with appropriate Alberta building product suppliers	To Be Determined		Edmonton/Calgary, AB	Chris Makowski, ED&T - 427-4323 Bob Demulder, ED&T - 422-7011
Other events that may be of interest to companies - but no planned departmental missions					
Madera '95	International forest industry exhibition	30-Jun-95	04-Jul-95	Buenos Aires, Argentina	Mark Spencer, ED&T - 427-4809
Swedish National Forestry Show and Conference	International forestry industry and timber management exhibition	01-Jul-95		Stockholm, Sweden	Horst Ramanauskas, ED&T - 422-7011
Build Russia '95	4th annual conference and exhibition for the Russian housing industry	01-Sep-95		Moscow, Russia	Horst Ramanauskas, ED&T - 422-7011
Low-Cost Housing Market Intelligence	Gathering and dissemination of information on potential market opportunities	Fall 95		Kenya, Tanzania, Uganda, Zimbabwe	Dean Sanduga, ED&T - 427-4327

ACTIVITY CALENDAR: Forest and Building Products					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Western Building Materials Association (WBMA) Annual General Meeting	WBMA has over 400 building product distributors in the Pacific Northwest; Annual general meeting; suppliers' trade show to introduce new products	01-Nov-95		Portland, OR	Chris Makowski, ED&T - 427-4323 Bob Demulder, ED&T - 422-7011
International Air Conditioning, Heating and Refrigeration Expo	Exhibitors and manufacturers of air conditioning, heating, refrigeration and ventilation equipment components and services	19-Feb-96	21-Feb-96	Atlanta, GA	Matt Collins, ED&T - 427-1905
Multi-Sector Market Intelligence	Gathering and dissemination of information on potential market opportunities	Mar-96		Ghana, Gabon, Angola, Namibia	Dean Sanduga, ED&T - 427-4327
TAPPI '96 (Technological Association of Pulp and Paper Industries)	Largest North American pulp and paper industry and equipment show; Manufacturing Expertise/Technology Awareness Program	03-Mar-96	06-Mar-96	New Orleans, LA	Darryl Martin, ED&T - 427-2005
Interbuild Trade Show	International building and construction exhibition	19-Nov-96	24-Nov-96	Birmingham, England	Joanne Harvey, ED&T - 427-4809
Canadian Home Centre Show	Ontario's largest gathering of retailers from home centres, lumber, building materials and hardware stores	Nov-96		Toronto, ON	Matt Collins, ED&T - 427-1905
Remodellers Show	International exhibition of products and services specific to the needs of the remodeling industry	Nov-96		Atlanta, GA	Matt Collins, ED&T - 427-1905

Information Technology



Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Information Technology

Highlights

Electronics/Telecommunications

* *There are presently 220 companies engaged in electronic design and manufacturing in Alberta.*

* *The value of manufactured shipments is expected to reach $1.95 billion in 1994.*

* *At present, the manufacturing industry employs approximately 7,460 people.*

* *Approximately 67% of product is exported outside of Canada.*

Software/Computing Services

* *Alberta has over 1,300 companies with expertise in software/computing services. Over 400 companies export outside the province.*

* *Strengths are in technical applications related to oil and gas/seismic, geomatics, communications/networking, and education/ training software.*

* *Rapid growth in global opportunities, including Canada's "information highway", make this a key sector for export development.*

The information technology (IT) "sector" includes activities ranging from the manufacture of electronic components and telecommunications devices to the delivery of telecommunications services to the development of software products and software-based services. For this plan, the IT sector has been split into two broad categories, "Electronics/ Telecommunications" and "Software/Computing Services". Definitions, characterizations and strategies for each category are reported under separate headings.

A precise definition and characterization of the IT sector has proven to be almost impossible. To address this situation, the signatories to the North American Free Trade Agreement (NAFTA) have directed their statistics-gathering agencies to develop a North American Industrial Standard Classification (NAISC) system which will specifically result in an accurate characterization of the IT sector by 1997. Along with the private sector, Industry Canada, and Statistics Canada, Alberta Economic Development and Tourism is working toward developing standardized definitions and data for this sector.

Electronics/Telecommunications

Sector Definition

The electronics/telecommunications industry sector can be categorized into six large subsectors, four of which are subsets of electronics. These include:

1. **Electronic Parts & Components** - This subsector includes passive devices such as connectors, resistors, capacitors, switches, relays and transformers, and active devices such as electron tubes, transistors, integrated circuits, batteries and power supplies. These components are the basic elements of all electronic devices and products.

2. **Instrumentation and Control** - This industry subsector includes the manufacture of all forms of measuring, sensing, recording and control devices. Specific products that are developed in this area include medical instrumentation, avionics, geophysical instrumentation, test and measuring equipment, supervisory control and data acquisition (SCADA) systems, monitoring and control devices, and photonic (laser and optical/electronic) instruments.

3. **Electronic Design and Subassembly** - This industry grouping consists of companies offering custom design services ranging from PCB layout to prototype development. Each company has

unique capabilities and technical knowhow. Many companies also offer contract subassembly services that range from single prototype manufacture to complete high volume turn-key operations.

4. **Computer & Peripheral Equipment** - This industry subsector manufactures electronic products for numerous computing applications. These manufactured products encompass:

   - Computers including mainframes, minis, workstations, all types of personal computers (PCs) and terminals.

   - Peripheral Equipment such as printers, plotters, mice or various types of scanners which interface with computers via a parallel or serial cable.

   - Computer Storage Equipment which are data or image storage devices. These products include hard drives, floppy drives, optical disk drives and larger storage systems (magnetic tape or disk array types).

   - Computer Processor Boards which include computer sub-systems that connect into workstation or PC expansion slots attached to the CPU motherboard. These application-specific processor boards can include accelerator boards, VGA cards, audio boards, process controller boards, and small computer systems interface (SCSI) performance enhancing boards. This category also includes data communication boards such as LAN interface boards, (Ethernet, Token ring) and telecommunication network interface boards (fax, ISDN, modem).

5. **Telecommunications Equipment** - This subsector consists of companies involved in the production of telecommunications products/ equipment. The equipment industry manufactures products for transmission, switching, and distribution of voice, data and video information over public and private networks. Standard products include digital switches, terminal devices (telephone sets, facsimile systems), multiplexers, routers, microwave, satellite and fibre optic transmitters/receivers, and mobile/wireless radio (or cellular) equipment.

6. **Telecommunications Services** - The telecommunications service providers are involved in the delivery of telecommunication services. This group of companies includes local and long distance telephone carriers, paging, telegraph, cellular services, resellers, broadcasting and cable TV.

International Overview

During 1992, the electronic equipment manufacturing market exceeded $1 trillion in global sales. Some of the industry subsectors are major industries in their own right. The semiconductor industry has grown to $90 billion in annual sales, with the magnetic storage market now exceeding $55 billion and the computer hardware industry passing $148 billion annually.

The global telecommunications equipment market was estimated to be $130 billion in 1990, growing at an annual rate of 6.2%. The global telecommunications services market reached $538 billion in 1990 and continues to grow at 7.1% annually.

Overall, North America accounts for 47% of the world information technology market. This is followed by Europe at 32% and Asia Pacific at 18%. The rest of the world accounts for only 3%. The leading industry sectors that will consume these products for the balance of the decade are the government and public sector, and financial, manufacturing services and wholesale/retail sectors.

Distinct trends are emerging which will drive the industry in new directions. These trends include:

- Demand for reduced time to market and rapid expansion to meet global competition. There is a tremendous need in today's business environment to provide employees with rapid access to a broad spectrum of information

which will maximize their ability to communicate.

- Major changes in entertainment services. The cable television business is rapidly evolving from fixed programming to the concept of entertainment-on-demand and interactive services.

- Increased social and government pressures. Drastic changes in health care reform and education will prove to be an important component. The same electronic network could be shared for both education and health care purposes.

- A growing shift from mainframe-based systems to desktop client/server applications. This will favour small, niche players, who are able to quickly respond to these changes.

These new directions are also affected by a dramatic restructuring of the telecommunications industry. The CRTC's recent decision to recognize the convergence of telecommunications, broadcasting and computing has challenged the industry to re-evaluate its business. The decision allows telecommunications carriers and cable TV operators to compete for the massive consumer infotainment market. The ruling puts Canadian companies on par with the United States and promises new electronic services such as video-on-demand. This convergence of services brings extensive opportunities to electronic companies and software developers who can enter or expand into this multi-media market.

This convergence of services is also creating opportunities to merge public branch exchange (PBX) systems with local area networks (LAN), interactive voice response, voice mail and client server systems. The end product is a telecommunications server now being developed by some companies.

Over the next five years, telecommunications will also focus on the evolution of broadband (multi-media) and wireless communications. This emphasis will create opportunities for high speed communication networks (electronic highways), personal communciations systems, mobile computing and digital video systems.

Alberta Position

In Alberta, the electronics and telecommunications industry has approximately 220 established companies engaged in electronic design and manufacturing. The period from 1990 - 1992 saw annual growth of only 6%. This modest growth can be attributed in part to the nation-wide recession and the restructuring of NovAtel Communications.

In 1993, the value of industry shipments was $1.46 billion, a 22% rise over 1992. The industry manufacturing sector now employs 7,460 people, representing a growth of 12.3%. The sudden surge in 1993 and the substantial rise projected in 1994 is primarily due to the rapid growth of Northern Telecom's manufacturing operations. Figure I illustrates the changes in the industry over the past few years.

Figure I

	1991	1992	1993	1994 Projected
Revenues ($billions)	$1.12	$1.19	$1.46	$1.95
Exports ($billions)	$0.977	$0.882	$1.24	$1.70
Employment	6200	5750	6450	7460

A significant part of the growth of the electronic and telecommunication industries in Alberta can be attributed to the establishment of advanced technology institutes. The Alberta Microelectronic Centre, The Laser Institute, TRLabs and the Electronics Test Centre provide applied research and development expertise, prototype development, testing and certification. Each institute is also actively involved in the process of transferring technology to industry.

Alberta's history as a major exporter of natural resources is also evident in its advanced technology sectors. Of the 220 active electronic companies, 90% are marketing outside Alberta. Sales distribution figures indicate that 88% of electronic and telecommunications products are exported outside

Alberta, totaling approximately $1.24 billion during 1993, an increase of 40% over the previous year.

Electronics

Alberta's electronics industry originated primarily to serve domestic demand from the petrochemical industry. During the 1980s, the industry diversified into other areas of the resource sector and made the first steps to market to the telecommunications sector. Prior to 1984, only 91 companies were operating in Alberta. Over the past 10 years, the number of electronics companies has grown by an average of 8.8% annually. The industry is still characterized by small firms with 54% of the companies having sales of less than $1 million and employing less than 10 people.

Instrumentation and Control is the predominant subsector in Electronics, with 48% of companies engaged in this activity. Alberta companies such as Valmet Automation, Sandwell, Harris Controls, Hewlett-Packard and Datek Industries are world leaders in the supervisory control and data acquisition (SCADA) market, supplying petrochemical plants, utilities, pipelines and telecommunication networks with process control monitoring.

One area of growing activity is photonics instrumentation. This group of companies has emerged due to the presence of the research institutes, TRLabs and The Laser Institute, as well as the basic research performed by the University of Alberta. Similarly, the geomatics area is expanding due to the activities of the University of Calgary. The heavy commitment to research by the Alberta Heritage Foundation for Medical Research is also assisting the development of companies specializing in new medical instrumentation. The Hewlett-Packard, IDACOM division should also be recognized as a world leader in the production and marketing of protocol test equipment to the telecommunications industry.

Activity in the **Electronic Components** subsector is concentrated in power systems and battery charger products. Tape and Reel of Canada is the only company servicing the packaging needs of Canada's electronic assemblers. LSI Logic Corporation also supports the Canadian industry with microchip design services.

The **Electronic Design and Subassembly** group accounts for 23% of the Alberta industry. A large number of these companies offer their expertise to assist other start-up companies with the design and development of new prototype products. More established companies have their own product lines and manufacturing facilities. There are now half a dozen companies that offer surface mount subcontract assembly. The largest and most technically advanced is LogiCan Technologies of Edmonton. This 25,000-square-foot facility is mil-spec approved and offers high volume, turn-key service.

An area with above average growth is the **Computer and Peripheral Equipment** subsector. Companies like Open Concept International are building Sun SPARC Station clones. Others such as VisionSmart, Compression Technologies, PowerStor Systems and Wi-LAN are developing strong niche positions in the digital signal processing, data compression, accelerator board and wireless LAN markets, respectively. These companies have excellent growth potential as they provide competitive products for the information technology sector.

Telecommunications

Alberta continues to be a leader in telecommunications manufacturing which accounted for $850 million in revenues in 1993. Calgary has established itself as a major centre for wireless research and manufacturing. It is the home of two of Northern Telecom's manufacturing facilities, both of which have world mandate manufacturing. Northern Telecom employs more than 2,600 people and manufactured more than $700 million worth of telephone sets and digital cellular switches and components in 1993. The company's activities alone are expected to grow to $1 billion by the end of 1995.

NovAtel Communications Ltd. of Calgary employs over 250 people and is a manufacturer of global positioning systems and cellular access products. JRC Canada Inc. of Lethbridge is Canada's only

designer and manufacturer of cellular telephones, employing over 275 people. Another 100 are expected to be employed at JRC within a year.

Computing Devices Corporation has grown to over 400 staff in just two years to develop radio communication systems for the $1.4 billion Canadian Armed Forces IRIS project. The industry's two dozen smaller telecommunication manufacturers are also at the forefront of wireless communications technology and produce a range of products.

Telecommunications Service Providers

The province supports the development of a strong telecommunications industry which is internationally competitive and capitalizes on export opportunities. Its traditional telecommunications carriers (AGT Ltd. and ED TEL) are active in ensuring Albertans have access to new technological advances. Each incorporates leading-edge innovations into its networks. Alberta was the first province in Canada to convert to digital switching and to roll-out individual line service to every residence. These carriers, based in Edmonton, had combined annual revenues of $1.57 billion and employed almost 10,000 people in 1993. The pending privatization/ acquisition of ED TEL attracted significant attention during 1994 and will be keenly observed in 1995. In addition, new competitive carriers such as UNITEL and Sprint are now entering the Alberta market.

Alberta is an important player in the building of Canada's advanced information and communications infrastructure known as the information highway. Much is already being done in the province to see the information highway come to fruition--involvement with the Canadian Network for the Advancement of Research, Industry and Education (CANARIE), the four western provinces' involvement with the Western University Research Consortium on High Performance Computing & Networking (WurcNet), and the study on the upgrading of the Alberta Regional Network (ARnet). AGT and ED TEL are key partners in the WurcNet initiative as is the High Performance Computing Centre (HPC) in Calgary, Canada's only large-scale vector processing computer centre.

Alberta is also well served by the cable television industry with cable services available to over 90% of the province. Calgary is now headquarters to Canada's second largest cable company, Shaw Communications Inc., with its systems providing service to most Canadian provinces. Future convergence of telephone and cable technologies, with new interactive services, will provide additional opportunities for both industries.

The overall activity by the telecommunication service providers is shown in Figure II.

Figure II

	1991	1992	1993	1994 Projected
Revenues ($billions)	$1.64	$1.63	$1.81	$1.88
Employment	13,200	12,800	10,600	10,500

Strategic Direction and Priorities

Priorities

Overall, Alberta's industry is internationally competitive with success in domestic and foreign markets. Most companies are niche market-oriented, with the exception of Northern Telecom, NovAtel and JRC Canada. These companies enjoy success in the rapidly evolving consumer marketplace. The presence of these global players has had a major impact upon some of Alberta's companies which act as suppliers. Included are not only suppliers of electronic components, but also metal fabricators and plastic manufacturers. These global players demand quality, excellence and competitiveness from each supplier.

Export activity is outlined by geographic region in the following paragraphs. Figure III summarizes the market region, country and type of products in order of priority.

Figure III
Electronics/Telecommunications
Markets and Products

Market Region	Countries	Products
United States		Telecommunications Equipment, Instrumentation, Control Systems, Computer and Peripheral Equipment, Contract Assembly
Europe	U.K. Russia Austria Norway Netherlands Germany Italy	Telecommunications Equipment, Control Systems, Oil Field Instrumentation, Geomatics
Asia-Pacific	Hong Kong Singapore Japan Taiwan Korea Australia China	Telecommunications Equipment, Instrumentation, Control Systems, Computer and Peripheral Equipment, Geomatics
Latin America	Mexico Brazil Venezuela Chile	Telecommunications Equipment, Oil Field Instrumentation
Middle East	Saudi Arabia Libya Morocco	Telecommunications Equipment, Oil Field Instrumentation, Control Systems, Power Systems

United States

The principal export market is the U.S. which consumes 39% of Alberta's goods and services. The principal products exported are telecommunications equipment, instrumentation and control systems. The computer peripheral equipment market sector is also experiencing rapid growth. The shift toward smaller, high performance workstations and PCs, as well as the expansion of computer networking equipment, will provide opportunities to innovative companies.

Alberta manufacturers are internationally competitive and can benefit due to their proximity to the U.S. and its concentration of multinational enterprises. The difficulty that arises with new products is the extensive research and development required and the need to develop and influence international standards.

Europe

Europe represents the second largest export market for Alberta companies with 12% of products shipped. The largest component is telecommunications equipment shipped to the U.K. Eastern Europe is undergoing major restructuring as countries embrace free enterprise and privatization of their telecommunications infrastructure. The best opportunities lie in the Czech and Slovak Republics (public data networks, cellular phone systems, ISDN, satellite TV broadcasting and cable distribution), Russia (digital switching, telephone sets, data transmission, fibre optics, satellite communications) and Hungary (data transmission, mobile and local telephone services).

The second most active export market is instrumentation and control systems shipped to Russia, Germany and Norway. The most promising region for growth is again Eastern Europe which requires modernization of its industries. Alberta companies, with their extensive background in providing advanced sensing and instrumentation to the utilities, processing and manufacturing industries, are well suited to enter this marketplace. However, Western European countries such as Germany, Italy, U.K. and France have the distinct advantage of closer proximity to this region. Hence, Alberta companies will require partnerships and distribution networks in Europe.

Major promising areas for distribution to Western Europe include networking products (LAN/WAN), computer peripheral products and PC add-on processor systems. Entry into this market is normally through Germany, which is the largest market in Europe and third largest worldwide.

Asia Pacific

This region represents the most promising area for new growth, after the U.S. During 1993, 6% of Alberta's exports reached this region. Hong Kong is presently the top export destination for Alberta's electronic products. Hong Kong has a world-class telecommunications infrastructure and acts both as a showcase for new products and as a gateway for market entry to China. Business opportunities exist for digital switching equipment, cellular telephones, computer processor boards, data communication equipment, optical fibre and cable TV.

Similarly, Singapore is the trading and commerce centre for the ASEAN region. This country is rapidly becoming known for its computer and peripheral products manufacturing capability. Business opportunities exist for data communication and computer processor boards.

The Asia Pacific region requires modernization of existing infrastructure (i.e., water treatment, utilities, petrochemical facilities). Hence, there are major opportunities for system integrators to supply instrumentation and control systems for new government projects. As more Asia Pacific countries become affluent, there has been a growing trend for improved resource management and environmental protection. Hence, geomatics companies have become successful in establishing a presence in Malaysia, Indonesia and Taiwan.

Latin America

A growing, untapped market is developing in this region which currently accounts for just 7% of Alberta's electronic products. Major changes are occurring in Latin America due to the privatization of telecommunication networks. The countries which have embraced this change are Mexico, Venezuela, Chile and Argentina. Only Northern Telecom has made significant inroads thus far. The products which will be emphasized over coming years to improve the telecommunication infrastructure include wireless communications, rural and local telephone services and spectrum management.

Many of Alberta's oil field instrumentation and control companies have been successful in penetrating markets in Mexico and Venezuela. Enhanced trade with Mexico will have a high government priority with the signing of NAFTA.

Middle East

At present, the Middle East represents only 2% of Alberta's export market. Trade with this region is primarily in oil field instrumentation and power systems for infrastructure projects. Sale of telecommunications equipment has increased due to modernization of networks in Morocco and Tunisia.

Additional opportunities exist in the fields of spectrum management and satellite communications.

Objectives

It is anticipated that the manufacturing industry sector will double to $4 billion in annual revenues by 2000. Hence, as a priority sector for the future growth and diversification of the Alberta economy, the government has the following intentions:

- To provide the necessary skilled workforce and technical infrastructure to support industry growth.
- To encourage risk capital for new ventures in manufacturing and product development.

Strategic Directions

- Identify equipment and component manufacturing opportunities and encourage supplier development initiatives with the Information Technology Association of Canada.
- Facilitate joint ventures and strategic alliances between foreign and Alberta companies through federal and provincial initiatives, missions, trade shows and networking events.
- Continue to support and promote Alberta's technology infrastructure as an effective means of providing technology transfer and prototype development facilities for industry.
- Cooperate with the telecommunication and cable carriers to anticipate and identify new business opportunities which will result from the convergence of these sectors.
- Identify, create and support clusters of excellence that will have a major industrial impact.

Measurement Criteria

- Increase the number of business opportunities and quality of market intelligence transferred to private industry.

- Increase the number of successful joint ventures and alliances between Alberta firms and foreign companies.
- Increase the number of export-ready companies to address business opportunities in growth regions such as Latin America and Asia Pacific.
- Increase Alberta exports from current 88% to 92% of revenues over the next three years.

Software/Computing Services

Sector Definition

Included under the heading of "software/computing services" are the following subsectors:

1. **Software Products** including "packaged" software products and custom software development. Products may be classified by market type:
   - Industry and technical applications - engineering and petroleum, manufacturing, geomatics and other technical specialties
   - Business applications - accounting, office automation
   - Healthcare
   - Educational
   - Communications.
2. **Software Services** including systems integration, consulting, and training.
3. **Information Services** including traditional services such as land related information services, trade and economic databases, networking services and the newer, explosively growing areas such as multi-media and Internet services.
4. **Computing Services** such as facilities operation.

International Overview

The explosive growth of information technology (IT) is reshaping the world economy. As an "enabling technology", IT is key to many advances in technology and productivity across all industry sectors. The widespread dissemination of information, made possible by the new technology, is changing the nature of work and leisure.

Within the IT sector, the world market for software/computing services is growing at 12% per year and will reach $490 billion by 1995. The U.S. market is almost half the total. Markets in Japan and Asia, 32% of world total, are growing even faster than the U.S. market. Europe has seen growth rates of over 20% a year for the past decade.

The software/computing services industry is affected by a number of trends and characteristics. Competition is intense and the market is volatile. The technology is rapidly changing, even "leap frogging" into new generations of products; as a consequence, human skills become rapidly obsolete in the absence of ongoing training programs. There is a shift from main frame environments to client-based personal computing and networking, increasing the need for industry standards and regulations. Multinational giants dominate the field, but many small "niche" players successfully market new products.

Perhaps the most significant development affecting the software/computing services industry is the incredible growth of the Internet. The Internet (the international network of networks) allows for the near-instantaneous dissemination of information on a global basis. By rendering location inconsequential in many respects, the Internet is reshaping the manner in which business is conducted (i.e. the virtual corporation and Electronic Data Interchange (EDI)); it is reshaping the delivery of public services (i.e. education and health care); and, it is underlying the development of a vast array of new services. The economic potential associated with the further development of the Internet and Internet services is clearly enormous.

Alberta Position

Data on the Alberta software/computing service sector is limited. However, based on a 1991 survey, about 1,300 Alberta companies specialize in software and computing services, employing over 14,000

people. Total revenues were in the order of $600 million. About 58% of companies are in Calgary; 40% in Edmonton; and 2% elsewhere in Alberta.

Of the 1,300 Alberta companies, about 500 to 600 actively produce and market software products and custom software development. An equal number of companies specialize in computer services such as systems consulting. Over 400 of the 1,300 companies are active exporters and export revenues were over half of total revenues.

In addition to these firms, large numbers of computing professionals are employed throughout Alberta in industries, organizations, and the public service. This reflects the pervasive nature of the industry; software and computing services are integral to virtually every sector of the Alberta economy.

Software/computing services companies are export-oriented. Almost one-half of software/computing services exporters derive over 50% of their revenues from sales outside the province. However, the largest export market for Alberta software/computing services industries is the rest of Canada (64%). The largest international market is the U.S. (24%), followed by Europe (5%), and Asia (1%). In essence, North American markets constitute nearly 90% of the Alberta software/computing services industry's out-of-province sales.

Alberta software/computing services exporters enjoy a number of strengths, but face special challenges as well. Strengths include:

- Expertise is exhibited in technical applications in niche areas such as oil and gas/seismic, geomatics, communications/networking, and educational and training software.
- The industry produces technically robust products, generally of good quality.
- The sector enjoys a close proximity to the U.S., the largest software/ computing services market in the world.
- Well qualified graduates from computing science, business, and engineering programs at Alberta's universities and technical schools generate a valuable labour pool.

Challenges faced by Alberta companies include:

- Local firms have suggested that their typically small size (i.e. less than 20 employees) leaves them poorly equipped and/or financed to address business planning and marketing, particularly international marketing.
- Software/computing services industry assets are often intangible (i.e. intellectual property, people, market position) which can make financing difficult. There are also concerns over protecting intellectual property in markets that may not respect copyright laws.
- Alberta is an extremely small domestic market and, as a consequence, software/computing service companies are virtually obliged to exploit non-domestic markets. While global markets can usually be accessed immediately, even by small new companies, such companies do indeed face global competition from their inception.
- The market is volatile and highly competitive, requiring continuous innovation and adaptation.
- Companies often face uneven cash flow, with significant non-recurring revenues, which makes financial planning difficult.
- Human skills require constant upgrading in the face of rapid technological change; for small companies, the cost of such upgrading can be significant; the cost of not providing such upgrading can be fatal.

Market Opportunities

United States

Significant opportunities for software developers exporting to the U.S. exist in all application areas. Of particular importance are: oil and gas, geomatics, office automation, education and training, and

manufacturing and processing. There are also numerous niche areas to which Alberta companies can market, limited only by their ingenuity. Additionally, with most computer application development occurring in California, opportunities exist for strategic alliances and joint development work for Alberta companies in the industry. Other target states include Washington, Oregon, Minnesota and Idaho.

Asia Pacific

Asia Pacific is a rapidly expanding market for software and computing services, but is highly competitive and therefore a challenge for Alberta companies to access. Rapid development of oil and gas fields in China, Indochina and Southeast Asia offers opportunities for oil and gas and seismic software. There are strong opportunities for geomatics and land information systems in countries such as Indonesia, Malaysia and China, where cadastral systems are being established, and to support infrastructure development. Japan offers opportunities for networking and communications software.

Europe

In Europe, the most promising opportunities are in the area of geomatics/GIS and engineering software. The telecommunications field also offers significant potential but unique barriers to entry will have to be overcome. Companies have been successful in marketing education software as well as training and teleconferencing software systems.

Strategic Direction and Priorities

The provincial government's objective is to facilitate the growth of the software/computing services sector in Alberta, helping local companies to exploit the enormous growth potential in this industry. To this end, the following broad priorities have been identified:

- Conduct a comprehensive characterization of the subsectors within the software/computing services industry.
- Determine the growth potential and barriers to entry in non-North American markets.
- Enhance access to financial markets for software/computing service companies.
- Enhance access to the Internet (Information Highway) and encourage the development of this infrastructure.
- Promote the "Alberta Advantage", the capabilities of local software/computing service companies, and the importance of this sector.
- Assist companies to become export ready through education and marketing assistance.

Activities

Consistent with these directions, government will work with industry over the course of the next year in executing the following activities.

- Cluster analyses - As identified in Figure IV (page 147), Alberta's distinctive competence in the software/computing services sector resides within the oil and gas/seismic, geomatics, communications/networking and education and training sectors. A detailed characterization of these sectors, including their expectation and need for government assistance, is essential. It is likewise important to determine the nature of other clusters within the province and to identify their potential and requirements for export growth.
- Geographical analyses - Almost 90% of Alberta's exports in the software/computing services sector are within North America. While a North American orientation is to be expected given that the U.S. represents one-half the global market, growth potential is evident in other markets, notably Asia Pacific, Europe and Latin America. Information on this potential and local nuances which affect market entry will be assembled and analyzed.
- Enhancing access to capital - Unique financing problems arise in relation to an industry where

significant assets are intangible. The provincial government will work with financial institutions in an effort to address these problems and to help make companies aware of financing options.

- Enhancing access to Internet - The economic potential of the Internet is widely acknowledged. The realization of this potential is dependent on widespread access to the network and a plethora of applications resident on the network. Alberta Economic Development and Tourism will work with carriers to promote access to the Internet and with local service providers to promote applications development.

- Industry promotion - To assist Alberta's software/ computing services companies take full advantage of emerging market development opportunities, as well as to respond to competitive challenges, government will work with industry to:

  – Assist industry associations and groups strengthen their export capabilities and develop export strategies.

  – Assist industry to strengthen their association(s), thereby becoming less fragmented.
  – Develop a systematic means of collecting and disseminating market intelligence.

  – Provide export development assistance to firms and groups of firms, with a focus on developing marketing skills.

  – Assist companies to penetrate new markets through participation in trade shows and missions, and meetings with incoming buyers.

  – Promote the importance of exporting and of information technology in Alberta, and support through educational and training activities.

  – Forge linkages between successful exporting firms and those which may benefit from an association with such companies.

  – Promote certification standards such as ISO 9000 and encourage companies to implement internationally accepted practices.

  – Develop public sector/business consortia or joint ventures in areas such as land information and flex nets.

  – Promote internationally that Alberta is a place to come for expertise and innovation in IT.

  – Work with the Western Provinces to develop a regional strategy to assist companies to export to Asia Pacific.

In fulfilling some of these activities the department is aware of, or in some cases expects to participate in, a number of trade shows/conference. A listing of these is presented in the Activities Calendar.

Measurement Criteria

Most immediately, measurement criteria relate directly to the activities which have been identified. By the end of 1995/96, cluster analyses should have clearly identified new growth and development opportunities within the software/computing services industry or should at least be under way to do so. A significant body of information will also have been assembled regarding the potential and local nuances affecting market entry in non-North American markets. Policies relating to access to capital and access to the Internet will be under development in conjunction with appropriate private sector representation. Industry promotion activities will be assessed on a company-by-company/contract-by-contract basis.

Ultimately, however, the success of this strategy must be reflected in greater numbers of local companies enjoying greater sales and exports, and employing greater numbers of Albertans. To the extent that these measures are trending in the proper direction, one can legitimately suggest that the strategy is working.

Figure IV
Software/Computing Services
Markets and Products

Market	Products & Services
Rest of Canada	oil and gas and seismic geomatics manufacturing communications/network systems enhancement office automation marketing accounting educational
U.S.	oil and gas geomatics manufacturing communications/network systems enhancement office automation marketing accounting educational
Mexico/Latin America	oil and gas seismic geomatics manufacturing communications/network office automation accounting and finance educational
Japan	communications/network systems enhancements office automation
Korea	SCADA geomatics manufacturing communications/network
Southeast Asia	oil and gas seismic geomatics communications/network education
China/Taiwan/Hong Kong	oil and gas seismic communications/network manufacturing systems enhancements office automation accounting and finance education
Europe	geomatics/GIS engineering educational communications/network marketing
Russia/Eastern Europe	oil and gas geomatics communications/network systems enhancement accounting

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

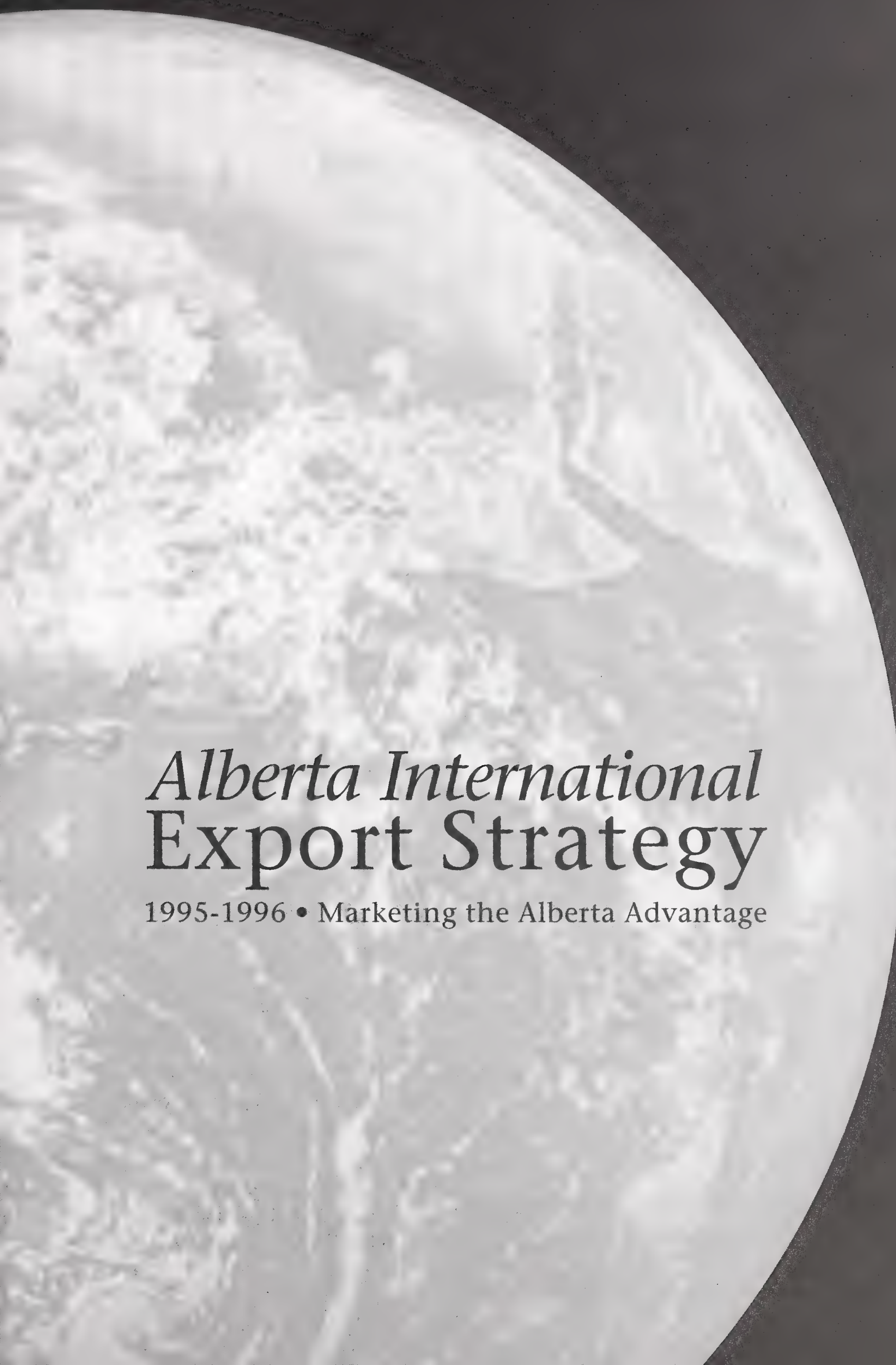
ACTIVITY CALENDAR: Information Technology					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
International Wireless Communications Expo	Telecommunications	Apr-95	Apr-95	Las Vegas, NV	Greg Yaremko, Economic Development & Tourism (ED&T) - 427-4809
New Exporters To Border States Mission	Computers - coordinated by Canadian Consulate	Apr-95	Apr-95	Boston, MA	Susan Elliott, ED&T - 427-1905
COMDEX/Spring '95	Computers/Software Conference and Trade Show	24-Apr-95	27-Apr-95	Atlanta, GA	Susan Elliott, ED&T - 427-1905; Catherine Gordey, ED&T - 422-0561
Mission of Cdn telecom companies to New England	Telecommunications	May-95	May-95	Boston, MA	Susan Elliott, ED&T - 427-1905
Geotechnica '95	Trade Show	02-May-95	05-May-95	Cologne, Germany	Bob Tunis, ED&T - 427-4809; Jim Hoffmeyer, ED&T - 422-0561
CATA Conference	Advanced Technology	03-May-95	05-May-95	Calgary, AB	Greg Yaremko, ED&T- 427-4809; Jim Hoffmeyer, ED&T - 422-0561
Sensor '95	Trade Show	09-May-95	11-May-95	Nuremberg, Germany	Bob Tunis, ED&T - 427-4809
AMTEC '95	Computing/Instructional Technologies	14-May-95	17-May-95	Guelph, ON	Catherine Gordey, ED&T - 422-0561
Technomart - High Technology Exhibition	Mission to Korea	22-May-95	27-May-95	Tajeon, Korea	Gerry Royer, ED&T - 427-4809
Radiocomm	Wireless Telecommunications	31-May-95	02-Jun-95	Toronto, ON	Al Williamson, ED&T - 422-0561
Dynamics of Exporting Software	Export preparation seminar for Alberta software companies interested U.S.markets	Jun-95	Jun-95	Alberta	Audrey Albrecht-Lee, ED&T-427-4323
Incoming delegation	Technology Transfer Mission	Jun-95	Jun-95	Donetsk, Ukraine	Don Wilson, ED&T - 427-4809
IEL 95 Conference	International Intelligence Engineering Laboratory Research Review Conference	24-Jun-95	25-Jun-95	Edmonton, AB	Catherine Gordey, ED&T - 422-0561
Wireless '95	Wireless Telecommunications	10-Jul-95	12-Jul-95	Calgary, AB	Donald Audsley, ED&T - 422-0561

ACTIVITY CALENDAR: Information Technology					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Semicon West	Electronics - 45,000 attendees (non members cannot exhibit)	11-Jul-95	13-Jul-95	San Francisco, CA	Greg Yaremko, ED&T - 427-4809
Comdex Canada '95	Computers/Software Conference and Trade Show	12-Jul-95	14-Jul-95	Toronto, ON	Catherine Gordey, ED&T - 422-0561
ICCC	Computer communications	21-Aug-95	24-Aug-95	Seoul, Korea	Catherine Gordey, ED&T - 422-0561
ASEAN S&T Week	Advanced Technology	28-Aug-95	03-Sep-95	Bangkok, Thailand	David Antoniuk, ED&T - 422-7011; Rabin Mendis, ED&T - 427-4809
Incoming USA Software Buyers Mission	Following Dynamics of Exporting Software Seminar, U.S. buyers of office and management software invited to meet Alberta companies	Sep-95	Sep-95	Alberta	Audrey Albrecht-Lee, ED&T-427-4323
Federal Geographic Technology Conference	Geomatics	Sep-95	Sep-95	Washington, DC	Susan Elliott, ED&T - 427-1905
New England Media Tour	Information Tech - Canadian companies meet U.S. software and trade writers	Sep-95	Sep-95	Boston, MA	Susan Elliott, ED&T - 427-1905; Jim Hoffmeyer, ED&T - 422-0561
Softworld '95	Software Forum	17-Sep-95	20-Sep-95	Vancouver, BC	Audrey Albrecht-Lee, ED&T-427-4323; Jim Hoffmeyer, ED&T - 422-0561
Canadian High Technology Show	Electronics	19-Sep-95	20-Sep-95	Toronto, ON	David Antoniuk, ED&T - 422-0561
Pacific Northwest Software Quality Conference	Software	27-Sep-95	29-Sep-95	Portland, OR	Jim Hoffmeyer, ED&T - 422-0561
Military Conversion Partnering Workshop	Geomatics and information on defence contracts; coordinated by Canadian Consulate	Oct-95	Oct-95	Atlanta, GA	Susan Elliott, ED&T - 427-1905
ISA '95	Instrumentation/controls	02-Oct-95	05-Oct-95	New Orleans, LA	David Antoniuk, ED&T - 422-0561
Telecom '95	Trade Show	03-Oct-95	11-Oct-95	Geneva, Switzerland	Donald Audsley, ED&T - 422-0561; Bob Tunis, ED&T - 427-4809
Comdex Asia Computer Show	Outgoing Mission/ Federal Government Information Booth	26-Oct-95	29-Oct-95	Singapore	Rabin Mendis, ED&T - 427-4809
Wescon '95	Electronics	07-Nov-95	09-Nov-95	San Francisco, CA	David Antoniuk, ED&T - 422-0561; Greg Yaremko, ED&T - 427-4809

ACTIVITY CALENDAR: Information Technology

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Elekronika	Electronics/Software	08-Nov-95	11-Nov-95	Munich, Germany	Bob Tunis, ED&T - 427-4809; David Antoniuk, ED&T - 422-0561
Comdex/Fall '95	Computers/Software	13-Nov-95	17-Nov-95	Las Vegas, NV	Greg Yaremko, ED&T - 427-4809; Jim Hoffmeyer, ED&T - 422-0561
Telecom Malaysia '95	International exhibition for telecom businesses, electronic communications systems and information technology	06-Dec-95	09-Dec-95	Malaysia	Rabin Mendis, ED&T - 427-4809
Comdex/PacRim '96	Computers/Software Conference and Trade Show	Jan-96	Jan-96	Vancouver, BC	Catherine Gordey, ED&T - 422-0561
COMNET	Software/Computers	29-Jan-96	01-Feb-96	Washington, DC	Susan Elliott, ED&T - 427-1905
Information Technologies	Incoming Missions	Feb-96	Feb-96	Alberta	Gerry Royer, ED&T - 427-4809
InCITE '96	Computing/Instructional Technologies	Feb-96	Feb-96	Nashville, TN	Catherine Gordey, ED&T - 422-0561
Nepcon West	Electronics - 30,000 attendees	Feb-96	Feb-96	Anaheim, CA	David Antoniuk, ED&T - 422-0561; Greg Yaremko, ED&T - 427-4809
CeBIT '96	Computer/Software Conference and Trade Show	Mar-96	Mar-96	Hannover, Germany	Bob Tunis, ED&T - 427-4809; Catherine Gordey, ED&T - 422-0561

Plastics and Advanced Materials and Processing



Alberta International
Export Strategy

1995-1996 • Marketing the Alberta Advantage

Plastics and Advanced Materials and Processing

* ***The Alberta plastics and advanced materials and processing industry is growing four to five times faster than the rest of the economy.***

* ***Alberta's plastics and advanced materials industry is modern, efficient, competitive, and highly motivated.***

* ***Over 300 companies are involved in the plastics and advanced materials and processing sector.***

Definition

A broad range of products are produced by Alberta's plastics processors, ranging from commodity industrial and consumer products to higher technology products for the electronics, computer, telecommunications and aerospace industries.

The advanced material companies produce a range of specialty polymers, metals, ceramics and composites, and use leading-edge processes such as thixomolding and pultrusion to manufacture products.

This sector includes the Advanced Materials and Processing Industry and Plastics Industry. While some similarities exist and some industry objectives are the same, each part of the sector is defined and considered separately in this document.

Advanced Materials and Processing

Definition

The Advanced Materials and Processes industry sector comprises Alberta companies which possess the capability to manufacture materials which have superior properties or apply advanced manufacturing processes to make finished products. The companies manufacture new materials such as specialty polymers, metals, ceramics and composites. The advanced materials and finished products produced by sector companies tend to underpin the activities of other industry sectors, are of high-added-value, sell into global niche markets, are at an early stage of the product life cycle, and foster competitiveness by enabling low unit cost of production.

Advanced materials include extreme service polymers, high strength fibres, corrosion-resistant materials and products, advanced polymer ceramic and metal composites, membranes, technical ceramics, new electronic materials and specialty metals. Large volume materials which exhibit one or more superior critical performance properties for a given application are included in the sector, as well as small volume high-added-value products. Companies using leading-edge processes, such as thixomolding or pultrusion, are also included.

International Overview

The world market for advanced materials and processes used in the manufacture of products is expected to exceed $100 billion by the year 2000.

The United States and Japan are the world leaders, with strong participation from Europe. In the U.S., military and aerospace industries have provided the impetus for development, while in Japan, advancement has occurred primarily due to companies seeking competitive supremacy in consumer markets throughout the world. Western European countries have various strengths. World competitive product performance is derived by providing consistent high-quality materials, with one or more outstanding properties exhibited by specific grades of materials for a given application. These can often be large volume leading-edge materials marketed globally. Products from other advanced materials and processes are sold into niche markets (small volume demand) of high unit value which are more attractive to small companies than to large ones.

The product outputs from the materials and processes of this sector are often inputs to downstream industries. As such, companies need to fund a sustained R&D effort in order to maintain a

competitive edge. The product and the market must be developed. Consequently, the ability to manage risk is a key factor to success. This reality has tended to link firms in these activities to larger corporate groups, in whole, in part, or through strategic alliances. Firms developing new products through R&D must be able to sustain long lead times relative to payback.

Some companies in the United States are world leaders in producing low volume, high performance materials as a result of their access to U.S. government military contracts. Firms possessing technologies used to produce products for the U.S. military are now looking for commercial applications and have increased the competitive pressure on other firms in the advanced materials sector. Japan has well established worldwide commercial operations and distribution systems which assist Japanese companies to exploit advances quickly.

Western European firms are also well established and represented worldwide. They are competitive contenders in terms of commercial markets for advanced materials and processes products, but are dealing with changing structures of these operations.

Alberta Position

The advanced industrial materials and processes sector in Alberta comprises a few large corporations which manufacture larger volume leading-edge products, and about 50 medium to small companies which have developed specialized products for niche markets. Annual and export sales are about $760 million and $470 million, respectively, and the sector employs approximately 9,000 people. The Alberta sector includes companies that produce advanced polymers, ceramics, specialty metals and composites as well as companies which use advanced processing techniques to manufacture leading-edge finished component products from traditional and new materials.

Activities in the sector include:

- Production of thixomolded magnesium parts for automotive, telecommunication, and the defense industries.
- Production of monolithic ceramics to provide wear resistance in pipe elbows, centrifuge bowls, cyclones.
- Production of geomembranes and vapour barrier membranes for use in containment structures and construction fibre reinforced composite piping and tankage.
- Use of coating technologies including application of metals, ceramics, and polymers and composites of these by plasma spray and thermal spray technologies.
- Production of elastomers and new rubbers for oilfield applications.
- Boronizing of metal parts for surface hardening and wear resistance.
- Production of ceramic body armour for military and police use.
- Application of cermets (metal/ceramic composites) for downhole pump components.
- Manufacture of biomedical products including implants and prosthetic devices.
- Application of composite weld overlays and state of the art welding technologies.
- Application of advanced joining technologies.

In the past 15 years, there has been rapid expansion of Alberta's synthetic polymer industry. This is due to the province's favourable feedstock position, stable government, and access to global markets, particularly in North America and the Pacific Rim. Alberta is becoming the centre of Canadian industrial polymer manufacturing and the centre of industrial research for these materials. Alberta's oil and gas resources provide feedstocks for the province's polymer manufacturing industries. World-scale, highly sophisticated processing and product technologies are used in the production of primary and secondary materials, such as ethane, benzene

and styrene which are basic building blocks for polymeric materials synthesis.

The application and/or development of new technology is a key ingredient for the success of companies in this sector. Large companies have sufficient resources to maintain their own R&D services for technology implantation. Small niche companies, on the other hand, do not have their own R&D resources and must rely on the availability of external R&D services.

In Alberta, basic and applied advanced materials and processes research is carried out at the University of Alberta and University of Calgary. Through contract research arrangements and the Joint Research Venture program, the Alberta Research Council works with industry on specific applied research projects to further develop, apply and commercialize technology. Other applied research work for clients is carried out at Alberta Microelectronic Centre, The Laser Institute and the Centre for Frontier Engineering Research. Also, the federal and provincial governments are supporting Westaim Technologies Inc., a wholly owned subsidiary of Sherritt Inc. and its allies, with a $140-million applied research program in this strategic technology area.

Strategic Directions and Priorities

Priority Markets

Advanced materials and process technologies are strategically important to Alberta's traditional industries such as oil and gas, forestry, and petrochemicals, as well as emerging industries like telecommunications, electronics, and health care. The potential for economic expansion in Alberta lies with future growth industries. Industrial polymers and related products manufacture are part of this group. Emerging industries offer high-value-added potential but low volume output in the near term.

Objectives

- To stimulate industrial development and economic growth in the areas of polymers, ceramics, specialty metals and composite materials.

- To increase the number of companies that use advanced materials processing techniques to produce technically superior products.

- To reduce the manufacturing cost of products in all industry sectors.

- To increase worldwide market penetration of Alberta products.

Strategic Directions

The main strategic direction for the sector is to build on current strengths. This involves three approaches: expand existing companies, create new companies and attract companies from outside the province.

A new strategic initiative is to create an Alberta Industrial Polymer Centre. This initiative, which is still in the formative stages, will foster growth of the Alberta polymer industry, and focus on the critical industry needs of research, technology, training and export marketing.

Westaim Technologies Inc., with a number of strategic partners, is carrying out market-driven applied research with a view to commercialization. At this point, a number of excellent products are nearing commercialization.

Another strategic direction is to identify niche markets in potential export regions and encourage or assist Alberta companies to service these markets. This includes encouraging Alberta firms to seek out strategic partners. This will provide companies with immediate and wider access to markets at a reduced cost.

Additionally, strategic partnering can potentially share the risk in developing new products. The focus for markets and strategic partners will be on the industrialized economies of North America, Asia and Europe.

Specific strategies include:

- Strengthen the international competitiveness of the Alberta polymer industry and support a domestic and export growth strategy for the sector companies.

- Maximize economic benefit to Alberta through the exploitation of Westaim-developed advanced materials and processes technologies.

- Where possible, address the needs of the Advanced Materials and Processes industry.

- Work closely with the industry to align public technological infrastructure with its needs.

- Create flexible business networks within the Advanced Materials and Processes sector that will allow companies to compete globally.

- Identify companies and industry sectors that can use enabling technologies to make them more efficient. This will provide niche markets for Alberta products.

Measurement Criteria for the Sector

- Growth in employment and sales in the sector.

- Growth in the number of companies in the sector.

- Growth in the number of types of materials and new processes used in Alberta.

- Growth in the number of companies exporting.

- An increase in the number of market regions to which Alberta advanced materials and processes companies are shipping their products.

- Growth in the number of companies participating in technology missions, trade missions, trade shows and conferences.

Plastics

Definition

The plastics industry in Alberta is composed of companies that process plastic resin and/or fabricate plastics into higher-value-added products. Processes include injection moulding, profile and blown film extrusion, rotational moulding, blow moulding, thermoforming and composites. The products produced are sold as components for other products or processes or as finished goods.

International Overview

For most plastics products, markets tend to be regional rather than global because of the relatively high cost of freight compared with the cost of the product. The exception to this is in higher-value-added products for which the cost of getting the products to market is low relative to their value.

In 1994, demand for plastics products grew throughout North America. Sector growth was faster than general economic growth, driven by the overall strengthening of the economy. Growth was seen in most sectors including automotive, construction, packaging and telecommunications.

Alberta Position

The Alberta plastics manufacturing industry comprises approximately 300 companies. They represent all of the processing and fabrication sectors, including injection moulding, profile and blown film extrusion, rotational moulding, blow moulding, thermoforming and composites. Most are small to medium-sized, with a few multinational companies. Typically, company sales range from $1 million to $25 million annually. Total annual sales for the sector have been estimated at $600 million with direct employment in the sector of approximately 4,500.

A broad and growing range of products are manufactured in Alberta. They encompass everything from innovative and higher technology

products to generic high volume products. Products such as optical acrylics, in-mould decorated products, reinforced plastic natural gas fuel storage vessels and pultruded structural components are but a few of the higher technology and innovative products made in Alberta. Bags, bottles and containers, film for the construction and agricultural industries and other miscellaneous consumer products, are also manufactured in the province. A plastics recycling industry has grown over the past few years. Fencing, bags, and other miscellaneous products are now manufactured using recycled plastic.

Plastic products generally have a limited shipping range because of the freight-cost-to-market-value ratio. Hence the regionalization of the market. But this also means that opportunities exist for manufacturing expansion in Alberta for products which are currently being imported into the western region. Higher value-added products have a much broader geographic potential and therefore hold much greater potential for export. Manufacturers of these products are successfully marketing throughout North America and into Europe. The efficiency and productivity of Alberta manufacturers along with the low cost of shipping products utilizing back-haul trucking, enable Alberta manufacturers to competitively access a larger portion of the North American market.

The Alberta plastics industry is supported by a number of world-scale resin manufacturers. The industry also benefits from the availability of a productive and highly skilled work force. This is due primarily to the Plastics Engineering Technology Program offered at the Northern Alberta Institute of Technology (NAIT). In addition to the NAIT program, technical and research assistance is available to the plastics industry through the Universities and Alberta Research Council. The Manufacturing Technologies Department of the Alberta Research Council offers a wide range of services to the plastics industry. Laboratories located in Calgary and Edmonton offer assistance in product and process development, material identification, materials selection, manufacturing assessment, equipment specifications and 3D rapid prototyping. Their laboratories are Standards Council of Canada accredited, with state of the art equipment, offering thermal analysis, material evaluation and quality assurance for materials such as composites, coatings, rubber and resins.

The industry is in the process of developing the Alberta Industrial Polymer Centre (AIPC). The AIPC is a research and product development network that will link Alberta and Western Canadian plastics processors with various research institutions and universities and colleges.

Strategic Directions and Priorities

Priority Markets

By the nature of the products produced, the primary market region for Alberta for the majority of plastics products is Western Canada and the Pacific Northwestern United States. The Market Matrix below shows the market region priorities based upon the type of products produced.

Plastic Product/Market Matrix

Plastic Products	Western Canada	Pacific Northwest U.S.	Other North America	Other Global
Construction	A	A	B	C
Packaging	A	B+	B	C
Oil & Gas	A	A	A	A
Agriculture	A	A	B	C
Telecom/ Aerospace	A	A	A	A
Consumer	A	A	B	C

Ranking of Market Opportunities: **A - High**, **B - Good**, **C - Low**

Objectives

- To have continued growth and diversification in the plastics sector through the development of new products and markets.

- To have sales increased through the broadened use and sales in the sectors served by the plastics industry.

- To have more Alberta plastics processors become export ready and to identify new markets.

Strategic Directions

- Encourage more companies to participate in Manufacturing Expertise Missions to national and international trade shows and conferences to identify and acquire the latest in competitive production technologies.

- Encourage better utilization of available R&D resources such as the Alberta Research Council to facilitate the introduction, development, and implementation of new technology in the plastic industry.

- Explore with individual firms the potential for, and the impediments to, increasing penetration of existing markets and developing new markets.

- Encourage more firms to take advantage of export orientation programs offered by the Department.

- Assist firms to become export ready.

- Encourage more strategic alliances with foreign firms to bring to Alberta the manufacture of products for Western Canada and the United States.

- Encourage the formation of flexible business networks, where appropriate, to assist in the growth and development of the industry.

Measurement Criteria

- Growth in employment and sales in the sector.

- Growth in the number of companies in the sector.

- Growth in the number of types of plastic products produced in Alberta.

- Growth in the number of plastic companies exporting.

- The number of market regions to which Alberta plastics processors are shipping their products.

- Growth in the number of companies attending or participating in trade missions, trade shows and conferences.

Activities

The following section identifies specific activities, such as trade shows, missions, and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

ACTIVITY CALENDAR: Plastics and Advanced Materials and Processing					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Hannover Fair	Trade Show	29-Mar-95	05-Apr-95	Hannover, Germany	Denny Ross-Smith, Economic Development & Tourism (ED&T) - 427-2005
Developing a Competitive Marketing Strategy (Export Readiness)	Export readiness training	21-Apr-95	23-Apr-95	Banff, AB	Gary Loblick, ED&T - 427-2005
Plast-Ex	Canadian Plastics Show; Manufacturing Expertise/Technology Awareness Program	May-95	May-95	Toronto, ON	Gary Loblick, ED&T - 427-2005
Engineering Foundation of North America	Conference	14-May-95	19-May-95	Kananaskis, AB	Ken Ball, ED&T - 422-0561
K'95	International Plastics Show; Manufacturing Expertise/Technology Awareness Program	Oct-95	Oct-95	Dusseldorf, Germany	Gary Loblick, ED&T - 427-2005
Global Business Opportunities Convention (G-BOC)	Conference	Oct-95	Oct-95	Osaka, Japan	Barry Salter, ED&T - 427-4809
Pipeline Integrity Workshop	Workshop	04-Oct-95	06-Oct-95	Banff, AB	Ken Ball, ED&T - 422-0561
Euro PM 95 Pondor Metallurgy	Trade Show	23-Oct-95	25-Oct-95	Birmingham, England	Ken Ball, ED&T - 422-0561
Society of Manufacturing Engineers - Autofact	Industrial Products	14-Nov-95	16-Nov-95	Chicago, IL	John Jacobson, ED&T - 427-1905
International Control	Industrial Controls and Products	12-Mar-96	15-Mar-96	Chicago, IL	John Jacobson, ED&T, 427-1905

Tourism

Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

Tourism

* ***Tourism in Alberta generated an estimated $3.12 billion in 1993. In terms of economic impact, tourism leads all other industries in Alberta with the exception of energy and agriculture.***

* ***The tourism industry employs approximately 100,000 Albertans (both full and part-time). Travellers in the province have a direct effect on employment in other industries such as the retail and service sectors.***

* ***Approximately one-half of all tourism receipts in Alberta ($1.45 billion) are from non-residents. This represents true export dollars to the provincial economy. The balance of tourism receipts ($1.67 billion) are from Albertans travelling within their own province.***

* ***In 1993, visitor expenditures in Alberta of $3.12 billion generated an estimated $1.1 billion in tax revenues, allocated as follows:***

  - ***Federal tax revenues of $710 million.***

  - ***Provincial tax revenues of $282 million.***

  - ***Municipal tax revenues of $114 million.***

* ***The goal for Alberta as stated in Seizing Opportunity is to exceed projected tourism receipts of $4.4 billion by the year 2000.***

Definition

Tourism is defined as the activities of persons travelling to, and staying in, places outside their usual environment for not more than one consecutive year for leisure, business and other purposes. For the purpose of this report, only non-resident tourists and non-resident export tourism dollars are being considered. The tourism demand is expressed in both tourism expenditures and in person trips. A person trip is defined as a person staying one or more nights in Alberta.

International Overview

- The World Tourism Organization estimates that global tourism receipts were valued at $2.79 trillion in 1992 and are predicted to grow at a rate of 4% per year. This will make tourism the largest industry in the world by the year 2000.

- The world economy is estimated to have grown by only 2.3% in 1993. This modest performance can be attributed to weak economic growth in Europe (0.5%) and the United States (2.7%), balanced by a rapidly growing Asian economy (6.6%), in particular, the Chinese economy (14% growth in the first half of 1993).

- With the exception of 1991, there has been a steady increase in total world tourist arrivals and total international tourism receipts.

Year	International Tourist Arrivals (thousands)	International Tourist Receipts (millions $US)
1989	427,884	210,837
1990	455,594	255,074
1991	455,100	261,070
1992	475,580	278,705

(Source: The Big Picture: 1993 Yearbook)

Canadian Overview

- The tourism industry is one of the largest industries in Canada. In 1992, tourism contributed more to the Canadian economy ($26.5 billion) than agriculture ($9.9 billion), mining ($7.5 billion), forestry ($2.6 billion), and fisheries ($1.0 billion) combined.

- Statistics Canada and Tourism Canada recently developed the Tourism Satellite Account which estimates that tourism now contributes nearly $30 billion to the Canadian economy. This represents the amount spent on goods and services by tourists and same-day visitors in Canada. Approximately $6 billion of this

amount represents export dollars injected into the Canadian economy by international visitors.

- Canada was` ranked 10th in the world in 1992 in tourism earnings ($5.75 billion) and 9th in attracting international arrivals (16.3 million). The challenge for Canada is to maintain, or increase, its global market share against increasing worldwide competition for international travellers.

- Canada has the unique position of bordering the largest concentration of wealth in the world. The U.S. provides Canada with four times as many visitors as do all overseas markets combined. While it is Canada's largest foreign market, the U.S. is also the world's second most visited country. It is a major competitor with Canada for overseas visitors.

- Prime Minister Jean Chretien endorsed the recommendations of the Buchanan Report on Tourism, on October 25, 1994. This included:

  - Creating a Canadian Tourism Commission (CTC) by January 1995 in partnership with industry and provincial governments.

  - Increasing marketing dollars from $15 million to $50 million, effective April 1, 1995.

  - Making the CTC responsible for both domestic and international marketing.

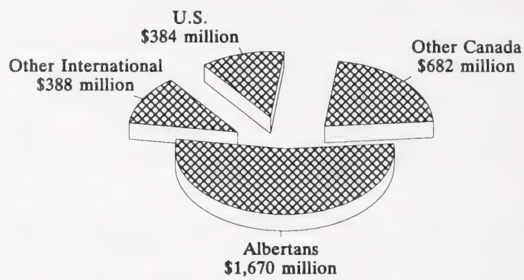
- The CTC was officially established on February 1, 1995.

- Industry and government have identified increased tourism marketing as necessary for attracting non-Canadian markets and competing on a global scale. Joint partnerships between government and industry are necessary to leverage government expenditures and to allow for expanded marketing initiatives.

Alberta Position

Tourism in Alberta accounted for $3.12 billion in revenues in 1993. As the graph below indicates, Albertans travelling in Alberta account for approximately half of this revenue ($1.67 billion). Other Canadians are Alberta's largest source of non-resident visitor revenue. On an international level, the U.S. provides an amount equal to all other international revenues. Total non-resident revenues equal $1.45 billion.

1993 Tourism Revenue in Alberta
Total Non-Albertan $1.45 billion



Source: 1993 International Travel Survey

The table below presents information on numbers of visitors to Alberta and expenditures, from the top 14 countries by origin.

Alberta and Canada both remain stable. The U.S. shows a small increase in person trips, but an increase of 16.4% in tourism expenditures.

Overseas markets have shown the largest increases in visitors and expenditures, with Germany, the United Kingdom, the Netherlands, France and Austria leading in Europe, and Japan and Taiwan leading in Asia Pacific.

International visitors tend to spend more per person per day than Canadians and Albertans while travelling in Alberta, although the numbers of travellers involved is significantly less. This is in part a reflection of a longer distance to travel. Japanese visitors continue to spend the most per person per day at $193/day, while other Canadians spend the least at $42.50/day.

Origin of Visitors to Alberta (Top countries ordered by 1993 expenditures in $Cdn)

Market	Expenditure ($ millions) 1993	% Change from 1992	Visitors (person trips) 1993	% Change from 1992	Expenditure (per person-per day)	Avg. Length of Stay (nights)
Alberta	1670.0	+1.8	8,328,500	+1.0	*42.50	*2.4
Other Canada	682.0	+2.1	3,037,000	+1.0	**42.50	**4.2
United States	384.0	+16.4	841,644	+1.4	101.30	4.5
Japan	112.0	+20.4	121,700	+38.0	193.20	4.8
Germany	63.4	+82.0	96,701	+52.0	85.56	7.7
U.K.	61.7	+9.0	104,849	+14.0	70.87	8.3
Australia	16.1	+5.3	26,168	-10.0	82.98	7.4
France	14.1	+22.0	22,021	+29.0	87.08	7.4
Switzerland	12.3	-8.0	15,082	-18.3	102.41	8.0
Hong Kong	11.5	+7.1	19,443	-8.0	95.60	6.2
Netherlands	9.9	+43.0	20,029	+55.0	59.27	8.4
Taiwan	6.6	+109.4	8,989	+156.8	92.19	8.0
Italy	5.6	-25.8	8,948	-0.6	129.57	4.9
Austria	5.5	+179.6	9,164	+108.3	76.63	7.8
Other	68.3	n/a	87,152	n/a	n/a	n/a
Total	**3123.2**	**+5.8**	**12,747,400**	**+1.6**	**245.00**	**n/a**

Note: The small sample size taken by Statistics Canada means numbers may vary from year to year and may not accurately represent the market.
*** Source: 1991 Resident Travel Survey**
**** Source: 1990 Non-Resident Travel Survey**

Alberta Strengths

- Alberta is an internationally recognized tourism destination offering diverse, high quality tourism products and experiences.

- The natural beauty and outstanding scenery, including the Canadian Rockies, prairies, forests, lakes, rivers, and badlands, provide an attractive diversity.

- National parks, abundant wildlife, protected environments, and uncrowded surroundings, help to differentiate the outdoor product from that elsewhere in the world.

- Opportunities exist to truly escape to the wilderness and get back to nature, while remaining close to urban comforts.

- The magnificent scenery provides a backdrop for an array of outdoor recreation and hard or soft adventure opportunities for which demand is growing.

- Historic sites, museums and heritage resources, including world-class facilities (e.g. Royal Tyrrell Museum of Palaeontology and Head-Smashed-In Buffalo Jump) highlight Alberta's diverse western, cultural, aboriginal, natural, and palaeontological heritage.

- A wide range of attractions (e.g. Calgary Olympic Park), shopping (e.g. West Edmonton Mall), cultural events (e.g. Calgary Stampede), festivals (e.g. Edmonton's festival season), and urban centres that are modern, accessible, safe and clean, offer unique experiences, complemented by friendly Western hospitality.

- Alberta offers competitive value for tourism dollars, with no sales tax for both visitors and potential investors.

- Growth of, and investment in, tourism facilities continue in the Bow Corridor, an area that has the unique advantage of being adjacent to Banff National Park and Kananaskis Country, and having international access through Calgary.

- Recent growth in smaller scale accommodation (guest ranches, bed & breakfasts) throughout Alberta has resulted in expanded products offering nature, adventure, or Western-themed experiences. Urban parks and recreation opportunities in Alberta's cities are exceptional and are now being packaged with business and convention products.

Alberta Challenges

- Alberta has yet to position itself as a "must see" tourism destination. The marketplace has limited awareness of Alberta and what it offers, which inhibits growth in both established and emerging markets. The absence of an aggressive awareness advertising campaign, albeit an expensive investment, makes it harder to compete with other destinations (e.g. British Columbia and Australia).

- Perceptions about the Alberta tourism product in the marketplace must be changed. Alberta is often thought to be expensive, far away, inaccessible, or cold. These perceptions change once individuals visit and experience Alberta.

- Accessibility from some offshore markets, and lack of direct flights in some cases, is a challenge affecting Alberta's competitiveness.

- Efforts must be made to broaden shoulder seasons in order to counter the seasonality issues. A majority of visitation occurs during the peak summer months.

- Service levels are improving, but attracting more sophisticated international travellers will require increased service quality to respond to their needs. The ability of Alberta tourism businesses to serve visitors in languages other than English is often weak. Opportunities for international visitors to exchange foreign currency at favourable rates are minimal. Limited tourism amenities in smaller centres, particularly recognizable service chains, makes it difficult to cater to travellers' needs.

- Awareness of the importance of tourism to the general public, individual businesses and the economy as a whole, must be increased.

- New tourism facilities and products based on market demand are key to ensuring Alberta remains competitive within the world market. Public-private sector partnerships will be required to identify new development opportunities, actively encourage investment in Alberta's tourism industry, and facilitate development of new private sector facilities.

- Increasing competition for investment dollars from existing and emerging tourism destinations means better networking and increased awareness of Alberta's tourism investment opportunities are needed. There is also a need to ensure that traditional lending institutions and equity investors in Canada and Alberta perceive tourism as a favourable investment opportunity.

- Specific development issues include demand for on-hill accommodation at existing ski areas to improve their competitive position with other international ski destinations. As new development proceeds, it is important to ensure that tourism remains a sustainable industry for future generations. The challenge is to find ways of balancing growth against the need for conservation and careful management of the natural resources that form the basis of Alberta's tourism industry.

- The tourism industry is increasingly being challenged to cooperatively fund marketing initiatives with a variety of partners. The creation of the Canadian Tourism Commission (CTC) provides a challenge to match the federal government's national contribution of $50 million. The Tourism Alliance for Western and Northern Canada (TAWNC) is being established by a memorandum of understanding for cooperative marketing in areas of mutual interest across the west. Funding will be cost-shared between partners, including government and industry. The new Alberta Tourism Partnership (ATP) is based on a cost-shared

structure. Even in the current government structure, decisions on whether to undertake initiatives are based on industry participation. The challenge to industry partners is how to coordinate all these initiatives, and to focus efforts to ensure the greatest return on investment from a limited pool of resources.

Alberta Opportunities

- An improved global economy provides opportunities to target markets with increased wealth and a growing desire to travel. The strong marketing efforts of British Columbia as a travel destination, combined with the potential of Alberta's tourism product, provide opportunities to market "Canada's West" in specific markets, such as Asia Pacific.

- There are also opportunities to work with other provinces or states in targeted cooperative marketing initiatives, such as "The Trail of the Great Bear" and the "Team Yellowhead" project. In order to better access the U.S. tourism market for heritage resources, Alberta Community Development has initiated reciprocal exchanges with the state of Montana, for information sharing and program initiatives aimed at future joint marketing ventures.

- The current exchange rate on the U.S. dollar provides an incentive for Americans to travel to Canada and Alberta. The lack of a provincial sales tax provides an additional monetary incentive to visitors from neighbouring provinces and states, as well as for Canadians to stay at home and travel in their own country. These "rubber-tire" regional markets can be encouraged to travel more often and for longer durations through time-sensitive, value-added incentives targeting visiting friends and relatives and weekend getaway packages.

- Alberta is in an excellent position to respond to growing market needs for a variety of tourism products ranging from nature and adventure-based tourism experiences to world-class facilities. Visitors are attracted by the diversity of landscapes, cultures, northern opportunities, well developed transportation and accommodation facilities, and internationally recognized attractions, such as the national parks.

- The Bow Corridor, with several new developments offering residential, hotel and golf course products, is emerging as a significant supplier of tourism facilities and opportunities. Provincially, there is growth and investment interest in small-scale accommodation such as lodges, guest ranches, inns and bed and breakfast accommodations, which offer specific nature, adventure or Western themed experiences.

Alberta Tourism Products

The Alberta tourism product has been divided into eight categories for the purpose of defining what Alberta has to offer. These products can then be matched with what geographic markets are seeking.

Alberta Tourism Products

Product Categories	Alberta Tourism Product Examples
Scenery	Diversity, Canadian Rockies
Nature-Based	National and Provincial Parks, bird watching, interpretive programs, nature photography, ecotourism, wildlife viewing
Outdoor Adventure	Trailriding, hunting, cycling (touring), mountain biking, fishing, fly-in fishing, heli-touring, heli-hiking, off-road vehicles, motorcycling, hiking, walking, canoeing, rafting, guest ranches
Destination Golf	Major golf courses
Winter Product	Downhill skiing, cross-country skiing, winter touring, dog-sledding, snowmobiling, snowshoeing
Business	Associations/conferences, incentive, meetings/corporations
Attractions	Historic sites and museums, mountain resorts, cities, industrial tours, shopping, crafts, visual/performing arts, aboriginal attractions/culture
Events	Sporting events, cultural events, festivals

Traditionally, tourism products have been grouped or packaged to provide experiences that can be positioned to geographic markets and the

appropriate segments within these markets. In the 1994/95 Alberta Global Business Plan, the tourism sector identified five major occasion-based groupings:

1. General Touring

2. Outdoor Adventure (hard & soft)

3. Ski/Golf/Major Sporting Events

4. Business/Convention

5. Visiting Friends & Relatives (VFR)

These groupings are still an important component of tourism marketing. The products listed above can be incorporated as appropriate into a variety of packages and/or experiences.

Market Overview

The following is an overview of priority geographic markets. In addition to this overview, a more comprehensive business and marketing plan is produced for each region. To access these plans, contact the individual geographic region noted in the contacts section at the end of this strategy.

Statistics provided for Canada are based on the 1990 Non-Resident Exit Travel Survey, the most recent data available for Canadian visitation and expenditure. Information on all other geographic areas is based on the 1993 International Travel Survey. The small sample size by Statistics Canada means the numbers may vary from year to year and may not accurately represent the market.

Other Canadian provinces are Alberta's largest non-resident markets, representing 49% of all non-resident spending in 1993. The Canadian economy continues to recover at a slow but steady pace, with strong economic performance in British Columbia affecting the market for Alberta.

Canadian Visitors to Alberta - 1990

	Expend. (millions) ($Cdn)	% of total	Person Trips (1+ nights) (000's)	% of total
British Columbia	296	39.9	1,241	43.9
Saskatchewan	142	19.1	894	31.6
Manitoba	56	7.6	205	7.2
Total Western Canada	**494**	**66.6**	**2,340**	**82.7**
Ontario	154	20.8	332	11.7
Quebec	23	3.1	48	1.7
Atlantic Provinces	32	4.3	38	1.3
Total Eastern Canada	**209**	**28.2**	**490**	**14.7**
NORTHERN CANADA (N.W.T. & Yukon)	39	5.2	74	2.6
TOTAL CANADIAN	742	100.0	2,830	100.0

Distinct market segments include Families (VFR market), Seniors (55+ years), and Middle Aged (45-54 years).

Northwest and the Northern Tier United States are primary markets for Alberta. The Northwest is one of the fastest growing economic regions in the United States. The Upper Midwest, or Northern Tier States, is another "close-in", or neighbouring market with an interest in Alberta because of its proximity and value as a getaway destination. Washington and Oregon highlight this region with the strongest economic growth and interest in Alberta's skiing, touring and adventure products. Montana is a very important market, especially to the southern regions of the province.

Northern U.S. Visitors to Alberta

Key States	1993 Expend. (millions) ($Cdn)	% Change from 1992	1993 Person Trips 1 + nights	% Change from 1992
Washington	29.5	+26.0	98,600	-8.0
Oregon	11.4	+14.0	39,300	+22.0
Montana	11.1	+10.0	66,600	+13.0
Minnesota	9.4	+77.4	27,639	+35.5
Idaho	5.3	-32.1	19,065	-28.6

Distinct market segments for the Pacific Northwest include Seniors (55+ years), Middle Aged (46-54), and Baby Boomers (26-45).

Distinct market segments for the Upper Midwest include Seniors and Middle Aged City/Touring, (45+ years), and Middle Aged and Baby Boomers for Outdoor Adventure and skiing.

The Eastern U.S. has the largest population base (105 million). This area offers a major opportunity to enhance Alberta's image through the media. The Eastern U.S. can be characterized as having experienced, sophisticated travellers with broad product knowledge. Florida and New York dominate this region, while Illinois and Ohio have shown considerable growth in recent years.

Eastern U.S. Visitors to Alberta

Key States	1993 Expend. (millions) ($Cdn)	% Change from 1992	1993 Person Trips 1 + nights	% Change from 1992
Florida	26.4	+80.4	34,393	+3.0
New York	20.0	+54.0	30,789	+45.0
Illinois	17.0	+35.0	30,791	+21.0
Ohio	13.8	+48.0	22,219	+0.4
Michigan	11.0	+19.0	22,508	-24.0

Distinct market segments include Seniors (55+ years, retired, "empty nesters"), Middle Aged (46-54 years, families), Baby Boomers (26-45 years, younger singles and couples), and Associations, Corporate Meetings and Incentive Travel buyers.

Southwest United States includes California and Texas which are two of the largest U.S. contributors to Alberta's tourism industry. In 1993, California and Texas contributed a combined $88.4 million and 165,000 person trips to Alberta. However, both states are only now emerging from recessions which, together, affected the entire U.S. economy. The North American Free Trade Agreement (NAFTA) will also assist the economic recovery of this region. The region is a key media area, in particular for broadcast and freelance mediums, providing an opportunity for Alberta to significantly increase overall awareness in the region. Texas will continue to dominate the Southwestern U.S. economically, culturally, and politically.

Southwest U.S. Visitors to Alberta

Key States	1993 Expend. (millions) ($Cdn)	% Change from 1992	1993 Person Trips 1 + nights	% Change from 1992
California	61.2	-6.0	118,817	-3.0
Texas	27.1	+1.0	45,733	-8.0
Colorado	8.3	+21.8	21,441	+42.0
Arizona	7.3	+50.1	14,863	+50.1
Utah	4.0	+31.5	19,893	+15.0

Distinct market segments include Young singles and couples (income over $50,000), Seniors (55+ years, empty nesters, RV owners), Middle Aged (46-54 years), and Corporate/incentive travel buyers.

Europe is one of Alberta's largest sources of travel revenue. Europe has a large, economically active population, with significant tourism expenditures and a high growth rate. European outbound traffic has been slowed by high unemployment rates and the worst recession since World War II. In spite of this, several countries in Europe have shown considerable increases in tourism expenditures and person trips to Alberta (e.g. France and the Netherlands). Germany has shown the greatest increase from 1992-93, becoming the largest European contributor of tourism revenue to Alberta, ahead of the U.K

Europe Visitors to Alberta

Key Countries	1993 Expend. (millions) ($Cdn)	% Change from 1992	1993 Person Trips 1 + nights	% Change from 1992
Germany	63.4	+82.0	96,700	+52.0
U.K.	61.7	+9.0	104,800	+14.0
France	14.1	+22.0	22,000	+29.0
Switzerland	12.3	-8.0	15,100	-19.0
Netherlands	9.9	+43.0	20,000	+55.0

Distinct market segments from Germany include Middle Aged (35-54 years), and Young (18-34 years).

Distinct market segments from the United Kingdom include Seniors (55+ years, VFR), Middle Aged (couples, empty nesters, outdoor and adventure), and Young (18-34 years outdoor adventure).

Asia Pacific represents a population of one billion, excluding mainland China. It contains key markets for Alberta, including Japan, Australia, New Zealand, Korea, Taiwan, Hong Kong and Singapore (combined population of over 200 million). These countries, combined with India (832 million), comprise an area with a population nearly four times that of the U.S.

Japan is the largest market in Asia Pacific, and Alberta's third largest tourism market, behind Canada and the U.S. Japan contributed $112 million in tourism receipts to Alberta in 1993, an increase of 20.4% from 1992. The total Japanese outbound market in 1992 reached a record 11.8 million travellers, an 11% increase over 1991, however, only 121,700 or 1% of these visited Alberta. The recession in Japan is slowing the growth of this major tourism market.

Asia's economic performance has acted as the catalyst for growth of the world economy, and will continue to do so into the 21st century. This growth will be enhanced by China's rapidly developing economy, estimated by the International Monetary Fund to be four times as large as previously measured, making it the third largest in the world. This growing economy is creating a middle class with an interest in outbound travel with potential to become a significant tourism market.

Australia received a record number of visitors in 1992 (2.6 million), establishing itself as a major competitor to Canada and Alberta, especially in the emerging Asia Pacific markets.

Asia Pacific Visitors to Alberta

Key Countries	1993 Expend. (millions) ($Cdn)	% Change from 1992	1993 Person Trips 1 + nights	% Change from 1992
Japan	112.3	+20.4	21,711	+38.5
Australia/New Zealand	18.9	+5.7	32,822	-4.0
Hong Kong	11.5	+49.0	19,443	-7.9
Taiwan**	6.7	+107.8	8,989	+156.8
China**	3.6	-13.9	3,659	-14.4
South Korea**	3.6	-7.7	5,500	+17.7

****The small sample size by Statistics Canada means the numbers may not accurately represent the market.**

Distinct market segments for Japan include "Office Ladies", "Silver Age", Student excursions, University/ High School, and Honeymooners.

Distinct market segments for Australia/New Zealand include Seniors (55+ years), Middle Aged (46-54 years), and Baby Boomers (26-45 years).

Market segments for Taiwan include 35+ years and Families.

Latin America is an emerging market. The future economic restructuring and political stability in this region may create growth in potential travellers to Alberta. NAFTA is creating a more favourable economic climate, which will lead to increased potential of this market. This region currently contains only three countries in the top 30 revenue generators to tourism in Alberta, but is experiencing improved economic performance. The region's overall growth rate of 3.2% in 1992, exceeded the growth rate of the global economy.

Latin America Visitors to Alberta

Key Countries	1993 Expend. (millions) ($Cdn)	% Change from 1992	1993 Person Trips 1 + nights	% Change from 1992
Argentina**	2.4	+60.0	1,864	-15.3
Brazil**	2.1	+11.0	2,924	-33.4
Mexico**	1.3	-64.8	1,786	-230.4

****The small sample size by Statistics Canada means the numbers may not accurately represent the market.**

Distinct market segments for Mexico include Families (middle to upper-class (U.S. $50K+) and Business/pleasure (40-50 years, male with incomes of U.S. $50K per year).

Distinct market segments for Brazil include Families (middle to upper class) and Business/Pleasure (40-50 years old).

Strategic Directions and Priorities

Geographic Market Priorities

Numerous factors influence the setting of priorities for markets. These include numbers of visitors, growth or decline of visitation, visitor expenditures, duration of stay, accessibility, motivations, commitment or interest of industry partners, cost, competition, opportunities, and threats.

For this strategy, priority markets have been identified based on three basic criteria for which information is available; visitor expenditures,

accessibility, and commitment by the industry. Priority markets have been identified on a geographic basis and identified as either Existing (Primary or Secondary), or Emerging markets.

Existing Primary markets are well established and provide a regular source of visitors and expenditures. Each existing primary market provides a minimum of $50 million in tourism expenditures to Alberta annually.

- Canada (BC, SK, MN, ON)
- U.S. (CA, WA, TX, FL, NY)
- Japan
- Germany
- United Kingdom

Existing Secondary markets are not as well established as primary markets, but do provide high levels of visitation and expenditures. Each secondary market provides between $10 million and $50 million in expenditures to Alberta annually.

- Other Canada
- Other U.S.
- Australia/New Zealand
- France
- Switzerland
- Netherlands

Emerging markets provide some visitation and expenditures, but indications are that they will rapidly increase in importance to Alberta. Revenues currently generated by these markets are generally less than $10 million.

- Hong Kong
- Taiwan
- Italy
- Austria
- South Korea
- Argentina
- Brazil
- Mexico

Additional research and evaluation are needed to refine these priorities to reflect all other factors.

These priority markets are presented below, along with tourism products that are considered to be primary or secondary motivators for travel in these markets.

Primary and Secondary Motivators for Travel for Priority Markets

	Product: Scenery
Diversity	**Primary** - Canada, United States, United Kingdom, Germany, France, Netherlands, Switzerland, Italy, Austria, Japan, Australia, South Korea, Taiwan, New Zealand **Secondary** - Hong Kong, Mexico, Brazil, Argentina
Canadian Rockies	**Primary** - Canada, United States, United Kingdom, Germany, France, Netherlands, Switzerland, Italy, Austria, Japan, Australia, Hong Kong, South Korea, Taiwan, New Zealand, Mexico, Brazil, Argentina
	Product: Nature-Based
National & Provincial Parks	**Primary** - Canada, United States, Germany, Netherlands, Switzerland, Austria **Secondary** - France, Japan, South Korea, Taiwan, Hong Kong, Australia, New Zealand
Interpretive Programs	**Primary** - Canada, United States, Germany, Switzerland, Austria **Secondary** - United Kingdom, France, Netherlands, Japan, Australia, Taiwan, New Zealand
Birdwatching	**Primary** - Canada, United States **Secondary** - United Kingdom, Germany, France, Netherlands, Switzerland, Austria, Japan, Australia, New Zealand
Nature Photography	**Primary** - Canada, United States, Germany, Switzerland, Austria **Secondary** - United Kingdom, France, Netherlands, Japan, Australia, New Zealand
Wildlife Viewing	**Primary** - Canada, United States, United Kingdom, Germany, Switzerland, Austria, Japan, Australia, South Korea, Taiwan **Secondary** - France, Netherlands, Hong Kong

	Product: Outdoor Adventure
Trailriding	**Primary** - Canada, United States, United Kingdom, Germany, Switzerland, Austria **Secondary** - France, Netherlands, Japan, Australia, South Korea, Taiwan, New Zealand
Hunting	**Primary** - British Columbia, Saskatchewan, United States, Germany, Switzerland, Austria
Cycling (touring)	**Primary** - British Columbia, Saskatchewan, United States, Germany, Switzerland, Austria **Secondary** - Quebec, Ontario, United Kingdom, France, Netherlands, Japan, Australia, South Korea, Taiwan, New Zealand
Mountain Biking	**Primary** - British Columbia, Saskatchewan, United States, Germany, Switzerland, Austria **Secondary** - Ontario, Quebec, United Kingdom, France, Netherlands, Japan, Australia, New Zealand
Fishing	**Primary** - Canada, United States, Germany, Switzerland, Austria **Secondary** - United Kingdom, Netherlands, Japan, Australia, South Korea, Taiwan, New Zealand
Fly-In Fishing	**Primary** - United States, Germany, Switzerland, Italy, Austria **Secondary** - Ontario, Quebec, United Kingdom, Netherlands, Australia, New Zealand
Heli-Touring	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Germany **Secondary** - Ontario, Quebec, United Kingdom, France, Netherlands, Austria, Japan, Australia, South Korea, Taiwan, New Zealand
Heli-Hiking	**Primary** - British Columbia, Saskatchewan, Manitoba, United States **Secondary** - Ontario, Quebec, United Kingdom, Germany, Switzerland, Austria, France, Netherlands, Japan, Australia, New Zealand
Off-Road Vehicles	**Primary** - British Columbia, Saskatchewan, Manitoba, United States
Motorcycling (touring)	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Germany, Switzerland, Austria **Secondary** - United Kingdom, France, Netherlands, Australia, New Zealand
Hiking	**Primary** - Canada, United States, United Kingdom, Germany, Switzerland, Austria, Netherlands **Secondary** - Quebec, France, Japan, Australia, New Zealand, Mexico
Walking	**Primary** - Canada, United States, United Kingdom, Germany, Netherlands, Switzerland, Italy, Austria **Secondary** - France, Japan, Australia, New Zealand
Canoeing	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Germany, Switzerland, Italy, Austria, Japan, Australia, New Zealand **Secondary** - Ontario, Quebec, France, Netherlands, South Korea, Taiwan
Whitewater Rafting	**Primary** - Saskatchewan, Ontario, Quebec, Manitoba, United States, Germany, Switzerland, Italy, Austria, Japan, Australia, New Zealand **Secondary** - United Kingdom, France, Netherlands, South Korea, Taiwan
Guest Ranches	**Primary** - British Columbia, Saskatchewan, Ontario, Quebec, Manitoba, United States, United Kingdom, Germany, Switzerland, Italy, Austria, Japan **Secondary** - Maritimes, France, Netherlands, South Korea, Taiwan, Australia, New Zealand
	Product: Destination Golf
Golf	**Primary** - Canada, United States **Secondary** - United Kingdom, Germany, Netherlands, Switzerland, Italy, Austria, Japan, Hong Kong, South Korea, Taiwan
	Product: Winter Product
Downhill Skiing	**Primary** - Canada, United States, United Kingdom, Germany, Switzerland, Italy, Austria, Japan, Australia, New Zealand, Mexico, Brazil, Argentina **Secondary** - France, Netherlands, Hong Kong. South Korea, Taiwan
Cross-Country Skiing	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Germany, Switzerland, Italy, Austria **Secondary** - Ontario, Quebec, Maritimes, United Kingdom, France, Netherlands, Australia, New Zealand
Winter Touring	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Germany, Switzerland, Italy, Austria **Secondary** - Ontario, Quebec, Maritimes, United Kingdom, France, Netherlands, Japan, Australia, Hong Kong, South Korea, Taiwan, New Zealand
Dogsledding	**Primary** - United States, Germany, Switzerland, Italy, Austria **Secondary** - Ontario, Quebec, United Kingdom, France, Netherlands, Japan, Australia, South Korea, Taiwan, New Zealand
Snowmobiling	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Germany, Switzerland, Italy, Austria **Secondary** - Japan, Australia, New Zealand
Snowshoeing	**Primary** - United States, Germany, Switzerland, Italy, Austria **Secondary** - Ontario, Quebec, Maritimes, United Kingdom, France, Netherlands, Japan, Australia, New Zealand

	Product: Business
Associations/ Conferences	**Primary** - Canada, United States, United Kingdom, France, Netherlands, Switzerland **Secondary** - Austria, Japan, Australia, Hong Kong, South Korea, Taiwan, New Zealand
Incentive	**Primary** - Quebec, Ontario, United States, United Kingdom, France, Netherlands **Secondary** - Italy, Austria, Japan, Australia, Hong Kong, South Korea, Taiwan, New Zealand, Mexico, Brazil, Argentina
Meetings/ Corporations	**Primary** - Ontario, Quebec, United States **Secondary** - United Kingdom, France, Netherlands, Italy, Austria, Japan, Australia, Hong Kong, South Korea, Taiwan, New Zealand
	Product: Attractions
Historic Sites & Museums	**Primary** - Canada, United States, United Kingdom, Germany, Netherlands, Switzerland, Italy, Austria, Mexico, Brazil **Secondary** - France, Japan, Hong Kong, South Korea, Australia, New Zealand, Taiwan
Mountain Resorts	**Primary** - Canada, United States, United Kingdom, Germany, France, Netherlands, Switzerland, Italy, Austria, Japan, Australia, South Korea, Taiwan, New Zealand, Mexico, Brazil, Argentina **Secondary** - Hong Kong
Cities	**Primary** - Canada, United States, United Kingdom, Germany, France, Netherlands, Switzerland, Italy, Austria, Japan, Australia, South Korea, Taiwan, New Zealand, Mexico, Brazil, Argentina **Secondary** - Hong Kong
Industrial Tours	**Primary** - Canada, United States **Secondary** - Germany, Switzerland, Italy, Austria, Japan, Australia, Hong Kong, South Korea, Taiwan, New Zealand, Mexico, Brazil, Argentina
Shopping	**Primary** - Canada, United States, Japan, Australia, Hong Kong, South Korea, Taiwan, New Zealand, Mexico, Brazil, Argentina **Secondary** - United Kingdom, Germany, Switzerland, Italy, Austria, France, Netherlands
Crafts	**Primary** - British Columbia, Saskatchewan, Manitoba, United States **Secondary** - United Kingdom, Germany, Switzerland, Italy, Austria, France, Netherlands, Japan, Australia, New Zealand, Mexico, Brazil
Visual & Performing Arts	**Primary** - British Columbia, Saskatchewan, Manitoba, United States **Secondary** - Ontario, Quebec, United Kingdom, Germany, Switzerland, Italy, Austria, France, Netherlands, Japan, Hong Kong, South Korea, Taiwan, Australia, New Zealand
Aboriginal Attractions & Culture	**Primary** - British Columbia, Saskatchewan, Ontario, Quebec, Manitoba, United States, Germany, Austria **Secondary** - Maritimes, United Kingdom, France, Netherlands, Switzerland, Italy, Japan, Hong Kong, South Korea, Taiwan, Australia, New Zealand
	Product: Events
Sporting Events	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Mexico, Brazil, Argentina **Secondary** - Ontario, Quebec, United Kingdom, Germany, Switzerland, Italy, Austria, France, Netherlands, Japan, Australia, South Korea, Taiwan, New Zealand
Cultural Events	**Primary** - British Columbia, Saskatchewan, Ontario, Quebec, Manitoba, United States, Germany, Mexico, Brazil, Argentina **Secondary** - Maritimes, United Kingdom, France, Netherlands, Switzerland, Italy, Austria, Japan, South Korea, Taiwan, Australia, New Zealand
Festivals	**Primary** - British Columbia, Saskatchewan, Manitoba, United States, Germany, Austria, Mexico, Brazil, Argentina **Secondary** - Ontario, Quebec, Maritimes, United Kingdom, France, Netherlands, Switzerland, Italy, Japan, Hong Kong, South Korea, Taiwan, Australia, New Zealand

Note: The above assessment is based on a combination of statistics and working knowledge of the markets.

1995-96 Strategic Directions

The Alberta government, in cooperation with the new Alberta Tourism Partnership and the tourism industry, will work to strengthen existing, and develop new, partnerships to pursue the following strategic directions:

- Identify research requirements, undertake research into products and markets, and disseminate results to industry partners.
- Encourage development, growth, and investment in the tourism industry.
- Increase private sector and community awareness of the benefits of, and encourage investment in, community-based tourism.
- Emphasize priority markets and initiatives that offer the greatest return on investment.
- Present a consistent and coordinated image to out-of-province markets.

The following table presents each strategic direction, along with a listing of specific actions to be undertaken related to that strategy. Criteria to be used to measure success are also identified. These may be modified in consultation with the new Alberta Tourism Partnership.

The Alberta government, in cooperation with the tourism industry, will work to strengthen existing and develop new partnerships to undertake the following strategic directions:

<table>
<tr><td colspan="2">Strategic Direction:
Identify research requirements, undertake research into products and markets, and disseminate results to industry partners.</td></tr>
<tr><th>Actions</th><th>Measurement Criteria</th></tr>
<tr><td>• Coordinate research on tourism products such as ecotourism, learning vacations, adventure products, incentive travel, festivals, museums and historic sites, destination golf and ski.
• Coordinate research on emerging or niche markets (i.e. Mexico, Hispanic populations in southwestern US, Northern Tier States).
• Facilitate visitor surveys (i.e. 1996 Non-resident exit survey).
• Undertake economic impact assessments of new attractions.
• Encourage consortia involvement.
• Collect tourism industry statistics.
• Work with the CTC regarding research initiatives based on product and markets.
• Assess market priorities based on additional factors such as competition, opportunities, travel trends, and market intelligence.</td><td>• Develop appropriate measurement criteria and statistics for all strategic directions.
• Feedback from industry partners regarding use of research undertaken.
• Cost sharing of research projects by industry partners.
• New studies conducted.</td></tr>
<tr><td colspan="2">Strategic Direction:
Encourage development, growth, and investment in the tourism industry.</td></tr>
<tr><th>Actions</th><th>Measurement Criteria</th></tr>
<tr><td>• Facilitate the Commercial Tourism and Recreation Leasing Process (CTRL).
• Make recommendations regarding policies that affect availability of land, streamlining of approval processes such as the CTRL.
• Undertake economic impact analyses.
• Provide tourism investor counselling.
• Undertake resource policy advocacy.
• Provide counselling regarding product and capital project development.
• Provide business counselling.
• Coordinate investment prospecting and matching.
• Identify tourism development and investment opportunities.
• Assist industry associations to develop and remain effective in advocacy and growth.</td><td>• Economic impact of tourism businesses and development in Alberta.
• Numbers of new tourism businesses and jobs created.
• Economic impact of community-based projects, events and facilities in the recreation, sport, art and cultural and historical industry sectors.
• Growth in ancillary businesses.
• Number of new investors.</td></tr>
</table>

<table>
<tr><td colspan="2">Strategic Direction:
Increase private sector and community awareness of the benefits of, and encourage investment in, community-based tourism.</td></tr>
<tr><th>Actions</th><th>Measurement Criteria</th></tr>
<tr><td>• Assist communities in implementing market-driven opportunities identified in their Community Tourism Action Plans (CTAP).
• Facilitate partnerships aimed at preparing and implementing Regional Tourism Action Plans (RTAP).
• Provide economic impact information on tourism projects.
• Facilitate marketing planning & implementation.
• Provide counselling/workshops in product/packaging to create more market-driven responsive products.
• Facilitate tourism product development, enhancement and expansion.
• Provide development counselling to communities and their partners who are developing events, facilities and attractions.</td><td>• Economic impact of tourism on regions and businesses in Alberta.
• Numbers of new tourism businesses and jobs created.
• Economic impact of community-based projects, events and facilities in the recreation, sport, art and cultural and historical industries sectors.
• Customer satisfaction with the community development assistance provided.</td></tr>
<tr><td colspan="2">Strategic Direction:
Emphasize priority markets and initiatives that offer the greatest return on investment.</td></tr>
<tr><th>Actions</th><th>Measurement Criteria</th></tr>
<tr><td>• Set priorities across all markets based on current expenditure, access to Alberta and industry involvement.
• Assess market priorities based on additional factors such as competition, opportunities, travel trends, and market intelligence.
• Encourage industry/consortia involvement.
• Provide marketing counselling.
• Undertake marketing planning & implementation.
• Facilitate joint marketing initiatives such as:
  • “Partners in Promotion”.
  • Visitor Sales & Service activities.
  • Consumer promotions.
  • Travel trade shows and events.
  • Tourism Alliance for Western and Northern Canada (TAWNC) activities.
  • Canadian Tourism Commission (CTC) activities.</td><td>• Return on investment.
• Feedback and participation from industry partners regarding amount of direct sales and visitation.
• Changes in the revenues, number and length of stay of visitors to Alberta from targeted markets from: 1995 Statistics Canada <u>International Travel Survey</u> 1996 Statistics Canada <u>Canadian Travel Survey.</u>
• Leverage of dollars for joint marketing initiatives.
• Number of cooperative initiatives with other jurisdictions.</td></tr>
<tr><td colspan="2">Strategic Direction:
Present a consistent and coordinated image to out-of-province markets.</td></tr>
<tr><th>Actions</th><th>Measurement Criteria</th></tr>
<tr><td>• Formalize industry involvement and committee membership in tourism planning to utilize the Alberta Tourism Advantage. This includes:
  • Alberta International Export Strategy.
  • Geographic and sector strategies.
• Facilitate Community and Regional Tourism Action Planning.
• Provide marketing counselling, research planning & implementation.
• Encourage consortium involvement.
• Undertake business/market opportunity/market development.
• Research images and themes to promote Alberta as a destination.</td><td>• Feedback from industry partners on shows, events, consortia involvement and other marketing initiatives.
• Number of effective and sustainable marketing alliances.
• Endorsement of a strategic plan(s).
• Involvement of private sector in the planning process(es).</td></tr>
</table>

STATUS REPORT 1994/95

Each of the seven strategic directions identified in the 1994/95 Alberta Global Business Plan are listed below, followed by examples of activities that successfully fulfilled the strategic direction.

Place emphasis on those priority markets that generate the greatest return for a given amount of marketing effort. This marketing effort will focus on the persuadable components of the travel decisions of those key markets.

- Partners in Promotion - Involves over 200 partners in multi-faceted marketing activities targeting media, consumers and travel trade in regional and Alberta markets. In 1995, the number of partners increased and five new markets were added.
- Taiwan Market Initiative - Alberta has partnered with British Columbia to promote Canada's West to tour operators, agents and travel media in this growing market, resulting in a substantial increase in the number of tour packages from Taiwan. Funding support from the Western Economic Partnership Agreement (WEPA).

Government and the tourism industry will cooperatively develop targeted strategies that are cost-effective, that present a consistent and coordinated image in the out-of-province markets, and that make use of partnerships to promote the Alberta Tourism Advantage.

- *Explore Alberta* Publication - This 46 page publication targets travel consumers in regional markets and Alberta. Including advertising from 52 Alberta tourism operators, over 500,000 copies were distributed through newspaper inserts, mail, Visitor Information Centres and the toll-free line.
- Alberta Travel Trade Manual - A second edition has been produced for the wholesale and retail travel trade in all markets. A total of 22,500 manuals were produced in English, French, Japanese, German, Mandarin, and Spanish. It features 80 Alberta advertisers and 246 Alberta tourism company listings.

Government will encourage and pursue alternative funding alliances between government, private sector, and non-traditional partners, and support private sector initiatives in existing and developing markets that position new and existing products that are export-ready.

- Community Tourism Action Program (CTAP) - Private sector operators, not-for-profit groups and municipalities invested in new and expanded tourism product valued at over $150 million. An interim evaluation of 900 projects showed 2,128 person years of employment, an economic impact of $128.3 million and $39.3 million, in tax revenues to all governments.
- Regional Tourism Action Planning - Local communities and private sector operators are involved in joint development and marketing initiatives for "Big Lake Country", "Kalyna Country", and "Great West Country".
- Dinosaur World Tour in Osaka - Support was given to this travelling exhibit organized by the ExTerra Foundation. In Osaka, the first overseas venue, it was viewed by over one million Japanese and grossed over $20 million in admission fees and $4 million in related concessions.
- Rocky Mountain Golf - Alberta and golf product packaged and promoted through trade, consumer and media programs in the Pacific Northwest and Southern U.S. In 1994, over 2,640 travellers generated over $524,000 in revenues.

Government and industry will cooperatively identify requirements for research and explore new, emerging, and niche markets. For example, new markets may include Latin America and Southeast Asia. Research relative to product development and niche markets may include ecotourism, educational and science-based experiences, adventure products, incentive travel products, festivals, museums and historic sites, destination golf and ski, and major sports events.

- Mexican Pleasure Travel Market Study - Subscribed to study conducted to determine tour travel behaviour of Mexican pleasure travellers and to monitor levels of interest and awareness of U.S. and Canadian destinations.
- Ecotourism Market Demand Study - This study assesses existing and potential market demand for British Columbia's and Alberta's ecotourism travel products. British Columbia, Alberta, Canadian Parks Service, and Industry Canada jointly funded this study.
- Northern Tier States Study - With the Western Tourism Research MOU Committee, Alberta coordinated this study on Alaska, Washington, Oregon, Idaho, Montana, North Dakota, South Dakota and Minnesota.
- Economic Impacts of Tourism - Economic impact models were used to estimate impacts of proposed and existing tourism events and attractions (e.g. Banff, Jasper, and Waterton National Parks; Arctic Winter Games; and World's Fair 2000 bid).
- The Canada's West Mexico Marketing Consortium - This consortium of government and private sector partners from Alberta and British Columbia has developed a marketing plan for Mexico.

The travel trade will be the primary focus of marketing initiatives, including such things as facilitating partnership opportunities, assisting in providing awareness and education of the travel trade, facilitating cooperative marketing promotions, encouraging inclusion of alternative products in existing packages of tour operators/ wholesalers, and development of new modular packages and itineraries. • In-Alberta Marketplaces - Three marketplaces (Destination Alberta, Canada's West and Alberta Marketplace) bring tourism operators and wholesalers to Alberta. Buyers from across the world experience the Alberta product and meet one-on-one with Alberta tourism suppliers. • Alberta Incentive Marketing Group (AIMG) - This industry-led group seeks to increase awareness of Alberta as an incentive travel destination. The first project was an incentive travel planner, to assist incentive travel planners, corporations, meeting houses, or convention planners.
Active communications campaigns will be encouraged to ensure that Alberta is well positioned in the minds of the consumer. This will include profiling the Canadian Rockies and alternative destinations, attractions, activities, shopping, unique heritage themes and facilities, and special sporting and cultural events. • *Just a Little Closer to Heaven - Kananaskis Country* - This TV program, highlighting the four-season recreational and multi-use opportunities in Kananaskis Country, reached all Alberta and over 1,200 communities across Canada via satellite and generated over 2,000 inquiries on the toll-free line. This Apple Box Production won the Gold Medal CanPro Award from The National Broadcasters' Association. • Northwest Outdoor Writers Association (NOWA) Fall Conference - NOWA held its annual fall meeting in Alberta in 1994. A total of 70 industry partners showcased Alberta outdoor travel product to 50 NOWA members. Media coverage estimated at more than $500,000 will result over the next three years. • Heritage Tourism Promotion - In cooperation with Alberta Historic Sites and Archives Service, this TV and radio campaign promoted Alberta's museums, historic sites and interpretive centres in Montana and Alberta, and generated over 1,000 enquiries on the toll-free line.
Targeted consumer initiatives will be considered in partnership with private sector wholesalers, operators and suppliers. • Visitor Sales and Service Visitor Information Centres and Toll-Free Line - Nine Visitor Information Centres (VICs) and the toll-free line position Alberta's tourism products, generate revenue, and gather detailed consumer market intelligence. In 1994, 301,321 visitors stopped at the VICs and over 800,000 visitors and potential visitors were influenced through the VICs, the toll-free line, and other enquiries. • Alberta Seniors Host Program (ASHP) - This Southwest U.S. program has been expanded to include travel trade elements in cooperation with eight industry partners. Highlights include 75 point of purchase displays consumer travel sweepstakes campaign, a travel agent incentive program, a media program, and an Alberta resident referral program. • Team Yellowhead - This government/private sector partnership across the West targets independent touring travellers, recreation vehicle owners, and seniors from the U.S. and select domestic markets. Using trade and consumer marketing tools and the media, over 18,500 enquiries for travel information have been generated.

Contacts

For information on specific geographic market areas, contact:

Western Region (Western Canada and Northern Tier United States)	427-4323
Eastern Region (Eastern Canada and Eastern United States)	427-1905
Americas (Southern United States, Mexico and Latin America)	427-4809
Europe	427-4809
Asia Pacific	427-4809
Middle East/Africa/India	427-4327
Product Development Counselling	427-2501

Activities

The following section identifies specific activities, such as trade shows, missions and conferences. The Alberta government may not participate in all activities noted. Some are identified only for information. For more details, contact the individuals identified.

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Waterton Castle Wildland Recreation Area established	Wildland area which must be established before Westcastle Resort can proceed	Jan-95	Jun/Jul-95	M.D. Pincher Creek	Owen Prince, Economic Development & Tourism (ED&T) - 297-5056
Revised Kananaskis Tourism/Recreation Development Policy	New policy to guide private sector tourism development in Kananaskis Country	Jan-95	Fall 95	Kananaskis Country	Kevin Crockett, ED&T-427-2501
Southwest Alberta Accommodation Study	Assess market for additional fixed roof accommodation	Jan-95	Jun-95	Southwest Alberta	Don Syrnyk, ED&T - 427-2501
Park Lake Golf Course Proposal Call	Private sector tourism development opportunity	Mar-95	Jun-95	Park Lake Provincial Recreation Area near Lethbridge, AB	Peter Cartwright, ED&T - 427-2501
Tourism Media Unit	Ensure maximum destination and product exposure in primary markets	Apr-95	Ongoing	All long-haul markets	Sharon Cruthers, ED&T - 422-6236
Joint Marketing Ventures	Joint marketing activities are developed in partnership with organizations, associations, tour operators, wholesalers, etc. to market collectively and leverage dollars	Apr-95	Ongoing	All markets	Peter Gregus., (AB & Regional) 427-4323; Orest Warchola (E. Canada & U.S.), 427-1905; Stewart MacDonald (Southern U.S.), 427-4809; Frank Parrotta (L. America), 427-4809; Joanne Harvey (Europe), 427-4809; Barry Salter (Asia Pacific),427-4809

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Media Familiarization Tours	Familiarization tours for media present the Alberta tourism product directly to travel writers and photographers in print, television, and radio; specific media are researched and travel stories are developed	Apr-95	Ongoing	All markets	Marion Jennings, (AB & Regional) 427-4323; Allison Mitton (E. Canada & U.S.), 427-1905; Stewart MacDonald (Southern U.S.), 427-4809; Frank Parrotta (L. America), 427-4809; Joanne Harvey (Europe), 427-4809; Barry Salter (Asia Pacific),427-4809.
Travel Trade Familiarization Tours	Familiarization tours for tour operators, travel agents, and CAA/AAA offices to increase familiarity with the Alberta tourism product	Apr-95	Ongoing	All markets	Rita Olmscheid, (Alberta & Regional) 427-4323; Orest Warchola (E. Canada & U.S.), 427-1905; Stewart MacDonald (Southern U.S.), 427-4809; Frank Parrotta (L. America), 427-4809; Joanne Harvey (Europe), 427-4809; Barry Salter (Asia Pacific),427-4809
Site Inspection Tours	Site inspection tours for association executives, meeting and incentive travel planners to increase their knowledge of the Alberta business travel product	Apr-95	Ongoing	All markets	Rita Olmscheid, (Alberta & Regional) 427-4323; Steven Leard (E. Canada & U.S.), 427-1905; Stewart MacDonald (Southern U.S.), 427-4809; Frank Parrotta (L. America), 427-4809; Joanne Harvey (Europe), 427-4809; Barry Salter (Asia Pacific),427-4809.

Activity Calendar: Tourism

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Product Development Tours	Product development tours for tour operators and wholesalers to develop tour itineraries	Apr-95		All markets	Rita Olmscheid, (Alberta & Regional) 427-4323; Orest Warchola (E. Canada & U.S.), 427-1905; Stewart MacDonald (Southern. U.S.), 427-4809; Frank Parrotta (L. America), 427-4809; Joanne Harvey (Europe), 427-4809; Barry Salter (Asia Pacific),427-4809
Canada and U.S. Electronic/Print Promotions	Electronic and print promotions in regional markets; Alberta prize packages from operators used in promotions	Apr-95		Alberta, Western Canada, Pacific Northwest U.S.	Marion Jennings, ED&T - 427-4323
Canada's West Travel Guide	Publication for consumer and trade markets in Mexico	Apr-95		Mexico	Frank Parrotta, ED&T-427-4809
Product Development and Media Tour from Mexico	Product development tour for tour operators and wholesalers; media familiarization tour	Apr-95	31-May-95	Alberta	Frank Parrotta, ED&T-427-4809
Alberta Winter Vacation Planner	Alberta Winter and Ski Publication for Consumers	Apr-95	Apr-95	All long-haul markets	Allison Mitton, ED&T, 427-1905
Destination Golf	Alberta marketplace on golf product for tour operators, meeting and incentive planners. Pre or post familiarization tours	Apr-95	Apr-95	Alberta	Drew Hutton, ED&T - 422-6236
National Tour Association (NTA) - Spring Exchange	Marketplace for Canadian and U.S. tour operators and wholesalers	05-Apr-95	08-Apr-95	Reno, NV	Orest Warchola, ED&T - 427-1905
AAA Arizona Product Presentation Seminars	Travel Trade Seminars	05-Apr-95		Phoenix, AZ	Danna Schmidt, ED&T-427-4809
Metro Phoenix World Travel Show	Trade Show for Consumers	07-Apr-95	09-Apr-95	Phoenix, AZ	Danna Schmidt, ED&T-427-4809
Lake Louise "Spring Fling"	Familiarization tours for media and travel trade from Southern U.S.	11-Apr-95	15-Apr-95	Lake Louise, AB	Danna Schmidt, ED&T-427-4809
American Airlines Vacation Supermarket	Travel Trade Promotion for Travel Agents	19-Apr-95	22-Apr-95	Fort Worth, TX	Stewart MacDonald, ED&T - 427-4809

Activity Calendar: Tourism					
ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
European Incentive & business Travel & Meetings Exhibition (EIBTM)	Trade Show for Incentive Travel Planners	May-95	May-95	Geneva, Switzerland	Joanne Harvey, ED&T-427-4809
Chicago Metro Ski Council	Travel Trade Show	May-95	May-95	Chicago, IL	Allison Mitton, ED&T-427-1905
Lesser Slake Lake RV Campground and Cabin Resort Proposal Call	Private sector tourism development opportunity	May-95	Aug-95	Lesser Slave Lake Provincial Park	Donna Poon, ED&T - 427-2501
Rendezvous Canada	Canadian travel trade marketplace for overseas tour operators and wholesalers	07-May-95	10-May-95	Halifax, NS	Joanne Harvey (Europe); Barry Salter (Asia Pacific); Frank Parrotta (Latin America), ED&T, 427-4809
"Swing Thru Canada"	Canadian Consulate activity for business travel influencers in S. California	08-May-95		Los Angeles, CA	Danna Schmidt, ED&T-427-4809
Rendezvous Canada	"Alberta Night" function to build attendance for Rendezvous '96 in Edmonton	10-May-95		Halifax, NS	Drew Hutton, ED&T - 422-6236
Alberta Spring Sales Mission to Asia	Tourism Sales Mission	23-May-95	03-Jun-95	Japan, Taiwan, Korea	Barry Salter, ED&T - 427-4809
Greater Washington Society of Association Executives (GWSAE) - "Springtime in the Park"	Trade Show for Association Executives	Jun-95	Jun-95	Washington, DC	Steven Leard, ED&T - 427-1905
Hansa Golf	Trade Show	Jun-95	Jun-95	Hamburg, Germany	Karin Teubert, ED&T - 427-4809
Tour Operator Product Development Tour - Southern U.S.	Familiarization Tour for Adventure Operators	Jun-95	Jun-95	Alberta	Stewart MacDonald, Danna Schmidt, ED&T-427-4809
Uniglobe Travel Showcase	Travel Trade Show	16-Jun-95	18-Jun-95	San Diego, CA	Danna Schmidt, ED&T-427-4809
Society of Incentive Travel Executives (SITE) - University	Educational Workshops and Seminars	17-Jun-95	23-Jun-95	Pattaya, Thailand	Steven Leard, ED&T - 427-1905
Meeting Professionals International (MPI)	Annual Convention	25-Jun-95	27-Jun-95	Chicago, IL	Steven Leard, ED&T - 427-1905

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Canadian Society of Association Executives (CSAE)	Annual Conference	29-Jul-95	02-Aug-95	Edmonton, AB	Steven Leard, ED&T - 427-1905
Ambassadair Travel Expo	Group Leaders Marketplace	Aug-95	Aug-95	Indianapolis, IN	Orest Warchola, ED&T - 427-1905
Canadian Meeting & Incentive Travel (CMIT)	Travel Trade Show	Aug-95	Aug-95	Toronto, ON	Steven Leard, ED&T - 427-1905
American Society of Association Executives (ASAE)	Annual Meeting and Trade Show	12-Aug-95	15-Aug-95	Washington, DC	Steven Leard, ED&T - 427-1905
Spruce Meadows	Joint marketing venture to include Equi Fair and trade show	Sep-95	Sep-95	Calgary, AB	Drew Hutton, ED&T - 422-6236
Shortline Tours Presentation	Group Leader Seminar	Sep-95	Sep-95	New York, NY	Orest Warchola, ED&T - 427-1905
National Association of Senior Travel Planners	Senior Group Leaders Promotion	Sep-95	Sep-95	Boston, MA	Orest Warchola, ED&T - 427-1905
Adventure Tours U.S.A	Travel Trade/Consumer Show, Educational Seminars on Ski Product	Sep-95	Sep-95	Dallas/Fort Worth, TX	Stewart MacDonald, ED&T - 427-4809
"Canada's Winter Wonderland" - S. California	Travel Trade Seminars	Sep-95	Sep-95	Los Angeles, CA	Danna Schmidt, ED&T-427-4809
S. California Ski Writers' Association	Media Trade Fair	Sep-95	Sep-95	Los Angeles, CA	Danna Schmidt, ED&T-427-4809
Travel of America Seminar Presentation	Travel Trade Seminar	Sep-95	Sep-95	Los Angeles, CA	Danna Schmidt, ED&T-427-4809
Passport Alberta, Canada 1995	Travel Agent Incentive Site Visit	Sep-95	Sep-95	Alberta	Danna Schmidt, ED&T-427-4809
Mission to Brazil	Travel Trade Seminars	10-Sep-95	18-Sep-95	Sao Paulo, Rio de Janeiro, and Porto Alegre, Brazil	Frank Parrotta, ED&T-427-4809
Brazil Travel Agencies Congress & Exhibition (Congresso Brasileiro de Agencias de Viagent) - Brazil	Travel Trade Marketplace	18-Sep-95	21-Sep-95	Brasilia, Brazil	Frank Parrotta, ED&T-427-4809
National Trade Shows, Inc.	Travel Trade Shows for Travel Agents	18-Sep-95	21-Sep-95	South Central U.S.	Stewart MacDonald, ED&T - 427-4809

Activity Calendar: Tourism

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Incentive Travel & Meeting Executives (ITME) - Show	Travel Trade Show	19-Sep-95	21-Sep-95	Chicago, IL	Steven Leard, ED&T - 427-1905
Canadian Holidays Ski Certification Seminars	Travel Trade Educational Seminars	Oct-95	Nov-95	Florida	Allison Mitton, ED&T-427-1905
Toronto Ski Show	Consumer Ski Show	Oct-95	Oct-95	Toronto, ON	Allison Mitton, ED&T-427-1905
Group Leaders of America (GLAMER) Shows	Group Leaders Marketplaces	Oct-95	Oct-95	Southwest U.S.	Danna Schmidt, ED&T-427-4809
Chicago Society of Association Executives (ChiSAE) - Fall Seminar	Educational Seminar and Trade Show	Oct-95	Oct-95	Chicago, IL	Steven Leard, ED&T - 427-1905
Alberta Seniors Host Program (ASHP)	Volunteer network of Alberta seniors; coordinate various marketing activities while wintering in Southwest U.S.	Oct-95	Oct-95	Southwest U.S.	Danna Schmidt, ED&T-427-4809
Asian Sales Mission including Kanata (Japan), Showcase Canada (Taiwan), and Discover Canada (Korea)	Tourism Canada Travel Trade Shows	Oct-95	Oct-95	Japan, Taiwan & Korea	Barry Salter, ED&T - 427-4809
Consumer Ski Shows - UK	Consumer Trade Shows	Oct-95	Oct-95	United Kingdom	Joanne Harvey, ED&T-427-4809
TTW Montreux	Trade Show	Oct-95	Oct-95	Montreux, Switz.	Karin Teubert, ED&T - 427-4809
United Vacations	United Airlines Travel Agents Trade Show	Oct-95	Oct-95	Denver, CO	Stewart MacDonald, ED&T - 427-4809
Destination Business Travel	Alberta marketplace on business product for business influencers and media; pre or post familiarization tours	Oct-95	Oct-95	Alberta	Drew Hutton, ED&T - 422-6236
Mission to Mexico	Travel Trade Sales Seminars	08-Oct-95	15-Oct-95	Monterrey and Guadalajara, Mexico	Frank Parrotta, ED&T-427-4809
Conozca Canada '95	Travel Trade Show	16-Oct-95	19-Oct-95	Mexico City, Mexico	Frank Parrotta, ED&T-427-4809
Canada Salutes U.S. Seniors	Canadian Consulate Group Leaders Seminar	Nov-95	Nov-95	Boston, MA	Orest Warchola, ED&T - 427-1905

Activity Calendar: Tourism					
ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Showcase Canada - New York	Canadian Consulate Travel Trade Show for business Influencers	Nov-95	Nov-95	New York, NY	Steven Leard, ED&T - 427-1905
Showcase Canada - Washington, DC	Canadian Consulate Travel Trade show for business Influencers	Nov-95	Nov-95	Washington, DC	Steven Leard, ED&T - 427-1905
Showcase Canada - Detroit	Canadian Consulate Travel Trade Show for business Influencers	Nov-95	Nov-95	Detroit, MI	Steven Leard, ED&T - 427-1905
Product Development and Media Familiarization Tours for Brazil	Familiarization Tours for Travel Trade and Media	Nov-95	Nov-95	Alberta	Frank Parrotta, ED&T-427-4809
Cologne Travel Fair	Trade Show	Nov-95	Nov-95	Cologne, Germany	Karin Teubert, ED&T - 427-4809
Chicago Ski Show	Consumer Ski Show	Nov-95	Nov-95	Chicago, IL	Allison Mitton, ED&T-427-1905
New Jersey Ski Council	Trade Show	Nov-95	Nov-95	New Jersey	Allison Mitton, ED&T-427-1905
Ottawa Ski Show	Consumer Ski Show	Nov-95	Nov-95	Ottawa, ON	Allison Mitton, ED&T-427-1905
Canada's West Marketplace	Alberta marketplace for Europe, Asia Pacific and Latin America tour operators and wholesalers. Organized by Alberta, BC, and Canadian Airlines	Nov-95	Nov-95	Alberta	Drew Hutton, ED&T - 422-6236; Joanne Harvey, (Europe); Barry Salter (Asia Pacific); Frank Parrotta (Latin America), ED&T - 427-4809
Ontario Motorcoach Association (OMCA)	Tour Operator Marketplace	06-Nov-95	09-Nov-95	Toronto, ON	Orest Warchola, ED&T - 427-1905
Atelier Canada	Travel Trade Show	08-Nov-95	09-Nov-95	Paris, France	Bob Tunis, ED&T - 427-4809
Society of Incentive Travel Executives (SITE) - Conference	Conference	08-Nov-95	12-Nov-95	San Antonio, TX	Steven Leard, ED&T - 427-1905
Dallas Morning News Skifest	Travel Trade and Consumer Ski Show	09-Nov-95	12-Nov-95	Dallas, TX	Stewart MacDonald, ED&T - 427-4809
National Tour Association (NTA) - Fall Exchange	Travel trade marketplace for Canada, U.S. and Mexico tour operators and wholesalers	12-Nov-95	17-Nov-95	Orlando, FL	Orest Warchola, (Canada/U.S.), ED&T - 427-1905; Frank Parrotta (Mexico), ED&T 427-4809
World Travel Market	Travel Trade Show	13-Nov-95	16-Nov-95	London, UK	Joanne Harvey, ED&T-427-4809
Japan Association of Travel Agents (JATA) - Trade Show	Travel Trade Show	Dec-95	Dec-95	Japan	Barry Salter, ED&T - 427-4809

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Taipei International Travel Fair '95	Travel Trade Show	Dec-95	Dec-95	Taipei	Jay Tam, ED&T - 427-4809
Leipzig Travel Show	Travel Show	Dec-95	Dec-95	Leipzig, Germany	Karin Teubert, ED&T - 427-4809
Product Development and Media Tours for Mexico	Product Development Tours for Tour Operators and Wholesalers and Media	Dec-95	Dec-95	Alberta	Frank Parrotta, ED&T-427-4809
Chicago Society of Association Executives (ChiSAE) - Showcase	Trade Show	Dec-95	Dec-95	Chicago, IL	Steven Leard, ED&T - 427-1905
American Bus. Association (ABA)	Motorcoach Operator Marketplace	03-Dec-95	08-Dec-95	Pittsburgh, PA	Orest Warchola, ED&T - 427-1905
United States Tour Operators Association (USTOA)	Marketplace for Canada, U.S. and Mexico tour operators	05-Dec-95	07-Dec-95	Cancun, MX	Orest Warchola (Canada/U.S.),ED&T - 427-1905; Frank Parrotta (Mexico), ED&T - 427-4809
Meeting Professionals International (MPI) - Conference	Annual Education Conference	10-Dec-95	13-Dec-95	Dallas, TX	Steven Leard, ED&T - 427-1905; Stewart MacDonald, ED&T - 427-4809
Alberta "Explore" Magazine	Alberta travel publication for consumers in the Alberta and regional markets	Jan-96	Jan-96	Alberta, Western Canada, Pacific Northwest U.S.	Betty Jandewerth, ED&T - 427-4323
Partners-in-Promotion Program	Partners-In-Promotion program covers trade and consumer sales activities in the Canada/U.S. regional and Alberta markets	Jan-96	Apr-96	Alberta, Western Canada, Pacific Northwest U.S.	Shirley Hauck, ED&T-427-4323
Alberta "Explore and Experience" Publication	Alberta travel publication for consumers distributed to all long-haul domestic and international markets	Jan-96	Jan-96	All long-haul markets	Orest Warchola, ED&T - 427-1905
Huddle West	Travel Trade Show	Jan-96	Jan-96	San Francisco, CA	Frank Parrotta, ED&T-427-4809
Meeting Professionals International (MPI)/ American Society of Association Executives (ASAE)	Travel Trade Show	Jan-96	Jan-96	San Francisco, CA	Danna Schmidt, ED&T-427-4809

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Cartan Agents Seminars	Travel Agents Sales Seminar	Jan-96	Jan-96	Chicago, IL	Orest Warchola, ED&T - 427-1905
Cincinnati Adventure Travel Expo	Adventure Travel Show for Consumers	Jan-96	Jan-96	Cincinnati, OH	Steven Leard, ED&T - 427-1905
Corroboree '96	Canadian Tourism Council of Australia Tourism Mission	Jan-96	Jan-96	Australia	Sheila Norris, ED&T - 427-4809
Utrecht Travel Show	Travel Trade and Consumer Show	Jan-96	Jan-96	Utrecht, Holland	Joanne Harvey, ED&T-427-4809
Seattle Partners-In-Promotion	Consumer Trade Show with Travel Trade/Media Component	Jan-96	Jan-96	Seattle, WA	Shirley Hauck, ED&T-427-4323
International Sportsmen's Expo - Portland	Adventure Travel Show for Consumers	Jan-96	Jan-96	Portland, OR	Shirley Hauck, ED&T-427-4323
Spotlight Canada - Los Angeles	Canadian Consulate Travel Trade Sales Seminar	29-Jan-96	01-Feb-96	Los Angeles, CA	Danna Schmidt, ED&T-427-4809
Spotlight Canada - Boston	Canadian Consulate Travel Trade Sales Seminar	Feb-96	Feb-96	Boston, MA	Orest Warchola, ED&T - 427-1905
Spotlight Canada - Atlanta	Canadian Consulate Travel Trade Sales Seminar	Feb-96	Feb-96	Atlanta, GA	Orest Warchola, ED&T - 427-1905
Spotlight Canada - Florida	Canadian Consulate Travel Trade Sales Seminar	Feb-96	Feb-96	Florida	Orest Warchola, ED&T - 427-1905
Spotlight Canada - Texas	Canadian Consulate Travel Trade Sales Seminar	Feb-96	Feb-96	Houston, Dallas, TX	Stewart MacDonald, ED&T-427-4809
Chicago Society of Association Executives (ChiSAE)	Education Meetings & Trade Show	Feb-96	Feb-96	Washington, DC	Steven Leard, ED&T - 427-1905
Showcase Canada - Chicago	Canadian Consulate Trade Show for business Travel Influencers	Feb-96	Feb-96	Chicago, IL	Steven Leard, ED&T - 427-1905
Boston Vacation/Adventure World	Adventure Travel Show for Consumers	Feb-96	Feb-96	Boston, MA	Steven Leard, ED&T - 427-1905
Chicago International Adventure Show	Adventure Travel Show for Consumers	Feb-96	Feb-96	Chicago, IL	Steven Leard, ED&T - 427-1905
Boston International Adventure Show	Adventure Travel Show for Consumers	Feb-96	Feb-96	Boston, MA	Steven Leard, ED&T - 427-1905

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Minneapolis Partners-in-Promotion	Great Midwest Vacation, Camping and RV Consumer Show with Travel Trade/Media Component	Feb-96	Feb-96	Minneapolis, MN	Shirley Hauck, ED&T-427-4323
Winnipeg Partners-in-Promotion	Midwest Canada Boat Consumer Show with Travel Trade/Media Component	Feb-96	Feb-96	Winnipeg, MB	Shirley Hauck, ED&T-427-4323
International Sportsmen's Expo	Adventure Travel Show for Consumers	Feb-96	Feb-96	Seattle, WA	Shirley Hauck, ED&T-427-4323
Destination Ski	Alberta marketplace on ski and winter product for tour operators, meeting and incentive planners; pre and post familiarization tours	Feb-96	Feb-96	Alberta	Drew Hutton, ED&T - 422-6236
Orange County Register Travel Show	Travel Show for Consumers	02-Feb-96	04-Feb-96	Orange County, CA	Danna Schmidt, ED&T-427-4809
Spotlight Canada	Canadian Consulate Travel Trade Sales Seminar	05-Feb-96	08-Feb-96	San Francisco, CA	Danna Schmidt, ED&T-427-4809
Anchor Your Ad Media Program	Joint Alberta travel advertisements in major newspapers in Canada/U.S. regional markets and Alberta	Mar-96	Jun-96	Alberta, Western Canada, Pacific Northwest U.S.	Peter Gregus., ED&T - 427-4323
New York Media Marketplace - Dateline Canada	Canadian Consulate Media Marketplace	Mar-96	Mar-96	New York, NY	Sharon Cruthers, ED&T - 422-6236
Spotlight Canada - Washington, Partners-in-Promotion	Canadian Consulate Travel Trade Show and Media Event	Mar-96	Mar-96	Portland, Seattle, Bellevue, WA	Shirley Hauck, ED&T-427-4323
Edmonton Vacation Supermarket - Partners-in-Promotion	Edmonton Spring Home & Garden Consumer Show; Travel Trade/Media Component	Mar-96	Mar-96	Edmonton, AB	Shirley Hauck, ED&T-427-4323
Calgary Vacation Supermarket - Partners-in-Promotion	At the Calgary Spring Home & Garden Consumer Show; Travel Trade/Media Component	Mar-96	Mar-96	Calgary, AB	Shirley Hauck, ED&T-427-4323
Saskatoon Partners-in-Promotion	Saskatoon Sports & Leisure Consumer Show with Travel Trade/Media Component	Mar-96	Mar-96	Saskatoon, SK	Shirley Hauck, ED&T-427-4323

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Boise Partners-in- Promotion	Boise Sports & RV Consumer Show with Travel Trade/Media Component	Mar-96	Mar-96	Boise, ID	Shirley Hauck, ED&T-427-4323
Billings Partners-in-Promotion	Montana Outdoor Recreation Consumer Exposition with Travel Trade/Media Component	Mar-96	Mar-96	Billings, MT	Shirley Hauck, ED&T-427-4323
Regina Partners-in-Promotion	Regina Home & Garden Consumer Show; Travel Trade/Media Component	Mar-96	Mar-96	Regina, SK	Shirley Hauck, ED&T-427-4323
Vancouver Partners-in-Promotion	B.C. Great Outdoors Consumer Show with Travel Trade/Media Component	Mar-96	Mar-96	Vancouver, BC	Shirley Hauck, ED&T-427-4323
Spotlight Canada - Buffalo	Canadian Consulate Travel Trade Sales Seminar	Mar-96	Mar-96	Buffalo, NY	Orest Warchola, ED&T - 427-1905
Spotlight Canada - UK	Canadian Consulate Travel Trade Marketplace	Mar-96	Mar-96	London, UK	Joanne Harvey, ED&T-427-4809
Showcase Canada - Washington and Oregon	Canadian Consulate Trade Show for business Travel Influencers	Mar-96	Mar-96	Washington and Oregon	Rita Olmscheid, ED&T-427-4323
Showcase Canada - Minneapolis	Canadian Consulate Trade Show for business Travel Influencers	Mar-96	Mar-96	Minneapolis, MN	Rita Olmscheid, ED&T-427-4323
Eastern Travel Association	Travel Trade Marketplace	Mar-96	Mar-96	Washington, DC	Orest Warchola, ED&T - 427-1905
Los Angeles Times Travel Show	Travel Show for Consumers	Mar-96	Mar-96	Los Angeles, CA	Danna Schmidt, ED&T-427-4809
Eastern Fishing & Outdoor Exposition, Inc.	Consumer Adventure Travel Show	Mar-96	Mar-96	Worchester, MA	Steven Leard, ED&T - 427-1905
Toronto Sportsmen's Show	Consumer Adventure Travel Show	Mar-96	Mar-96	Toronto, ON	Steven Leard, ED&T - 427-1905
Quebec Sportsmen's Show	Consumer Adventure Travel Show	Mar-96	Mar-96	Quebec, PQ	Steven Leard, ED&T - 427-1905
Montreal Sportsmen's Show	Consumer Adventure Travel Show	Mar-96	Mar-96	Montreal, PQ	Steven Leard, ED&T - 427-1905
Spokane Partners-in-Promotion	Home & Garden Consumer Show; Travel Trade/Media Component	Mar-96	Mar-96	Spokane, WA	Shirley Hauck, ED&T-427-4323
Mayflower Tours Tourfest	Group Leaders Show	Mar-96	Mar-96	Chicago, IL	Allison Mitton, ED&T-427-1905
National Trade Shows, Inc.	Travel Trade Shows for Travel Agents	Mar-96	Mar-96	Southwest U.S.	Stewart MacDonald, ED&T - 427-4809

Activity Calendar: Tourism

ACTIVITY	DESCRIPTION	START DATE	END DATE	LOCATION	CONTACT
Experience Canada's West - Mexico	Travel Trade Show	Mar-96	Mar-96	Mexico City, Monterrey, and Guadalajara, Mexico	Frank Parrotta, ED&T-427-4809
National Bank Club Promotion	Bank Travel Club Seminar and Trade Show	22-Mar-96	25-Mar-96	Atlanta, GA	Orest Warchola, ED&T - 427-1905
Spotlight Canada - Pittsburgh	Canadian Consulate Travel Trade Sales Seminar	Apr-96	Apr-96	Pittsburgh, PA	Orest Warchola, ED&T - 427-1905
Showcase Canada - Atlanta	Canadian Consulate Travel Trade Show for business Travel Influencers	Apr-96	Apr-96	Atlanta, GA	Steven Leard, ED&T - 427-1905
Great Falls Partners-in-Promotion	Home & Garden Consumer Show; Travel Trade/Media Component	Apr-96	Apr-96	Great Falls, MT	Shirley Hauck, ED&T-427-4323
Prince George Partners-in-Promotion	Prince George Home Consumer Show with Travel Trade/Media Component	Apr-96	Apr-96	Prince George, BC	Shirley Hauck, ED&T-427-4323
American Association of Retired Persons (AARP) Convention & Trade Show	Consumer and Travel Trade Show	Apr-96	Apr-96	Denver, CO	Stewart MacDonald, ED&T - 427-4809
Alberta Winter Vacation Planner	Alberta Winter and Ski Publication for Consumers	Apr-96	Apr-96	All long-haul markets	Allison Mitton, ED&T-427-1905
Destination Alberta Marketplace	Alberta marketplace for U.S. and Canadian business travel influencers (association, corporate, and incentive travel); pre and post familiarization tours	Jun-96	Jun-96	Alberta	Drew Hutton, ED&T - 422-6236
Society of American Travel Writers (SATW) Conference	1996 Annual Conference tentatively scheduled for Alberta. Pre or post familiarization tours.	Jun-96	Jun-96	Alberta	Peter Gregus, ED&T - 427-4323
Alberta Winter Explore & Experience Publication	Alberta Winter and Ski Publication for Consumers	Sep-96	Sep-96	Alberta, W. Canada, Pacific NW	Marion Jennings, ED&T - 427-4323

Activity Calendar: Tourism					
ACTIVITY	**DESCRIPTION**	**START DATE**	**END DATE**	**LOCATION**	**CONTACT**
Alberta Marketplace	Alberta marketplace for Canada, U.S., and Mexico tour operators and wholesalers; pre or post familiarization tours	Oct-96	Oct-96	Alberta	Drew Hutton, ED&T - 422-6236
Canada's West Marketplace	Alberta marketplace for Europe, Asia Pacific and Latin America tour operators and wholesalers. Organized by Alberta, BC, and Canadian Airlines	Nov-96	Nov-96	Alberta	Drew Hutton, ED&T - 422-6236; Joanne Harvey (Europe); Barry Salter (Asia Pacific), ED&T - 427-4809
Alberta Travel Trade Planner	Alberta Travel Publication for Travel Trade	Dec-96	Dec-96	All markets	Orest Warchola, ED&T - 427-1905

Appendix

Alberta International Export Strategy

1995-1996 • Marketing the Alberta Advantage

AEROSPACE

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Includes equipment and service firms that design, manufacture and service a full range of products for the general aviation and space markets. • The products range from complete aircraft and spacecraft to all component parts on both these vehicles and complete ground-support equipment. • Provides ongoing maintenance, repair and operational support services for air, space and ground equipment. • Subsectors include: Repair & overhaul, aerospace aviation services and training, aircraft parts, engines and engine parts, aerospace-defence avionics, publication of technical manuals. **Other Facts** • 60 companies are engaged in niche aerospace markets. • Sales in 1992 were $180 million. • Currently employs approximately 2,100 people.	• Repair & Overhaul is strongest subsector, with expertise in maintenance, repair and modification of fixed and rotary wing aircraft. Aerospace Aviation Services and Training facilities for air and ground crew are excellent and serve the world market. • Strong base of world-competitive companies and dynamic, forward-looking management and employee teams position Alberta aerospace industry to increase role in the global aerospace market. • A well trained workforce and infrastructure, as well as highly qualified engineering staff, enables firms to meet stringent quality standards.	• Success in some sectors is tied to one or two companies. • Companies need to continually access new technologies to remain competitive. • Critical mass is growing, but there are few large component suppliers with financial resources to assume more risk; small companies lack capital to grow and aggressively market their products and services. • Companies are sometimes at a disadvantage because of customs delays in processing work orders. • To be competitive, companies must use new advanced materials and processes.	• United States is principal export market. • South America, Australia and Asia are also important growing markets for Alberta companies to focus on.	• Opportunities to expand Alberta's capabilities in small to medium-size engine repair and in overhaul of larger engines. • Aging aircraft, fleets worldwide, mostly commercial, need new processes to extend their life.	• Continue to encourage and assist Alberta companies to set up alliances with first-level subcontractors. • Help Alberta companies identify opportunities and follow up leads. • Help industry obtain a business regarding the Canadian civil air navigation system. • Work with industry to develop flexible business networks and strategic alliances. • Identify a mechanism to provide required R&D support to industry. • Work with industry to support manpower training and infrastructure. • Help industry access investment financing and strategic partners. • Work with industry to encourage the establishment and maintenance of a favourable tax and corporate business environment (a) within Alberta, and (b) with a view to influencing Canada's domestic environment. • Help companies obtain a share of federal and U.S. government projects. • Lobby federal government to (a) continue major sector projects, and (b) continue support of the aerospace industry. • Continue to support centres of excellence. • Encourage participation in trade shows and airshows as a means for Alberta companies to access potential clients and to develop cross promotions with the tourism sector. • Help industry develop innovative marketing activities.

AGRICULTURAL AND INDUSTRIAL EQUIPMENT, TECHNOLOGY AND SERVICES

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Two subsectors: agricultural equipment, and industrial equipment. • Sales of agricultural equipment are about $400 million annually, with 50% moving outside the province. • Sales employ about 2,000 people in 230 companies. • Sales of industrial equipment exceed $500 million annually, employing over 4,700 people in 170 companies.	• Alberta's agricultural equipment subsector is diverse. • Several companies produce component parts. • These firms are able to focus on production of less sophisticated equipment and adapt more quickly than full-time firms to changing market conditions. • Alberta has the potential to be the world-recognized source for agricultural machinery and technology in the next decade.	• Low profile, not well recognized as a major industry sector. • Demand for construction and mining machinery is cyclical and erratic. Successful firms in Alberta's industrial equipment subsector are those that have been able to withstand this factor, as well as provide reliable and low maintenance machines.	**Agricultural equipment:** • Western Canada, particularly Saskatchewan. **Small Alberta manufacturers** • Saskatchewan, Manitoba, U.S., especially key northern states, southern states increasing in importance. Also Ukraine, Mexico, Australia, Middle East in longterm. **Industrial equipment** • Canada, U.S.	• Specialization has been the key to export markets, with Alberta firms exporting specialized parts and equipment to markets primarily in the U.S.. • The trend is to design industrial and construction machinery with more efficient power units and faster work cycles.	In cooperation with other departments of government and with the private sector: • Provide better promotion and information resources. • Maintain existing markets and improve awareness of positive and negative long-term market trends. • Improve companies' awareness and identify new market opportunities. • Promote strategic alliances of Alberta firms in global markets. • Increase marketing abilities of companies. • Increase management abilities of companies. • Increase production and engineering capabilities of companies. • Increase knowledge and use of technology by companies.

AGRICULTURE AND FOOD

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
Four Subsectors: • crops and feedstuffs • livestock, genetics and services • meat and animal by-products • processed foods.	• Increased exports in value-added items such as beef, pork, processed meats and food products. • Bulk commodities such as canola seed, wheat and barley.	• GATT and NAFTA have increased market access, but competition for those markets is great.	• U.S. - largest export market: $1.4 billion in 1993. • Japan - $504 million in 1993 (canola seed, wheat, barley). • Mexico - livestock genetics, wheat, barley, canola, special crops, pork and dairy products. • Taiwan - $42 million in 1993 (hides, alfalfa meal and pellets, other feeds, canola cake and meal, and barley). • South Korea (feed wheat, cattle hides, canola meal, and dehydrated alfalfa products).	• South Korea - potential exists in barley, canola seed and oil, honey, water and pork. • Market access and greater sales are possible in South East Asian countries. • Eastern Siberia - similar potential to that of China. • Hong Kong - established market but shows potential as a trans-shipment centre in the Asia-Pacific Region. • Latin America -potential for wide range of products and services. • Eastern Europe and Former Soviet Union - potential for both agricultural food products and services. • Western Europe - the GATT should improve access in a number of sectors.	• Improve industry's ability to access new market opportunities. • Improve industry's ability to add value to products. • Develop information and technology that improve competitiveness. • Ensure industry has access to needed technology, knowledge and skills. • Strengthen industry's ability to improve risk. • Ensure responsible stewardship of soil and water resources, and lands. • Encourage greater private sector involvement in funding and research.

ARCHITECTURE, ENGINEERING AND CONSTRUCTION (AEC)

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS /ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
Services used in design and construction of residential, commercial, industrial and institutional buildings and facilities, including transportation and municipal infrastructure. **Architectural Services** • Private firms, licensed under provincial legislation, provide independent architectural design and consulting services to the public. • Generally firms are small businesses. • The industry employs over 2,000 Albertans. **Consulting Engineering Services** • Engineering and project management of commercial, institutional, industrial and infrastructure projects. • Approximately 500 firms employ an estimated 6,500 Albertans. • Estimated annual fee billings are $1.2 billion. • Over 80% of the firms are classified as small. Many are single or dual disciplined. **Construction Services** • Building, renovation, repair and demolition of immobile structures; alteration of natural topography. • About 4,500 registered firms, plus specialized tradespeople; approximately 13,000 employers, many with staff of 20 or less. • Nearly 80,000 full-time employees, plus 15,000 more in peak periods. • Expected to provide $9.3 billion worth of services during 1994.	**World Class Strengths** **Architecture** • Residential housing • Land development • Corporate/office buildings • Educational facilities • Tourism/recreation facilities and support services • Industrial/manufacturing support facilities • Health care facilities and systems • Restorations • Agriculture facilities • Project management **Engineering** • Hydrocarbon exploration, development and processing • Public infrastructure • Tourism/recreation facilities and support services • Industrial facilities • Building envelope technology • Thermal power generation and co-generation • Pipelines and SCADA systems • Water resource facilities • Project management **Construction** • Project and construction management • Cold weather construction • Public infrastructure	**Major Factors** Financing (e.g. risk, bid support, and end user/ international project). • Market intelligence (geographic & project) • Identification of qualified & reputable contacts or agents in potential markets • Identification & formation of alliances & partnerships • Marketing skills • Cultural awareness of potential markets **Other Factors** • Limited international awareness of sector • Procurement policies • Recognition of credentials • Different codes and standards • Different foreign investment, business establishment and contracting rules • Different legislation and regulations • Technical expertise • Cost competitiveness • Taxation structures • Longterm focus • Establishing foothold using strategic tools, e.g. Beijing Petroleum Training Centre, using "one big win" in each major market.	• Mexico • Asia Pacific/ South East Asia: China, Japan, Malaysia, Thailand, Indonesia • India • United States	**Expanded Markets** • Mexico • Asia Pacific /South East Asia: China, Japan, Malaysia, Thailand, Indonesia • India • United States **New Markets** • South East Asia: • Vietnam • South America • Eastern and Central Europe	**Financing** • Support the efforts of Alberta AEC businesses to access export financing. **Marketing/Market Intelligence** • Help industry develop promotional tools and programs to raise international awareness of AEC services, companies, and specialized expertise. • Improve level, type and timeliness of market intelligence for AEC businesses. **Partnering, Networking and Competitiveness** • Help industry develop business skills, strategic partnering skills and networking programs to increase expertise in identifying opportunities and achieving success in international markets. • Support increased integration of sector to improve: international competitiveness; effectiveness of industry associations; formation of strategic alliances and joint ventures, and potential for increased private sector/public sector co-operation. • Increase sector's ability to compete in international and domestic markets by advocating on its behalf in intergovernmental negotiations.

ARTS AND CULTURAL INDUSTRIES

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS /ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
Includes 'the Arts' and 'Cultural Industries' **The Arts** • Visual arts includes fine arts, crafts and design • Performing arts • Literary arts **Cultural Industries** • Independent film, video and television production and distribution • Sound recording • Book publishing • Magazine publishing. • In 1993, the direct economic impact of the cultural sector in Canada was over $15 billion.	• Contributed $1.3 billion directly to the Alberta GDP in 1992/93; an additional indirect contribution of $.6 billion resulted in a combined impact of $1.9 billion. • Provided 58,302 direct jobs, and a combined total of 79,678 direct and indirect jobs in 1992/93. • It costs less to generate a job in the arts than in other industries: $20,000 to create an arts job; $100,000 to create a job in light industry; and $200,000 to create a job in heavy industry. • A dynamic arts and cultural community is a critical factor in business locations. As with any other industry which provides such a significant contribution to society, underlying public and private investment and support is essential. • Sector increasingly incorporates new technologies in production and delivery.	• Protection of intellectual property rights (e.g. copyright). • Diminishing funding from government; need to create partnerships with private sector. • Financing based on intellectual property difficult. • Lack of baseline information and set monitoring procedures. • Increasing competition for film attraction; also luring away talent. • Costs of paper, etc. in regards to production in the province. • Limited marketing and promotional skills and networks.	• Other parts of Canada • U.S. • Niche markets worldwide on individual company or product basis.	• Integration of individuals, companies and activities as a result of new technologies, delivery mechanisms (e.g. CD ROM), and increasing demands for products. • Trends toward co-production and growth in national and international sales.	**Market Identification, Penetration and Distribution** • Improve measurement of results and comparison with other provinces (Identify information gaps and research needs; develop research proposals and seek funding; develop profiles of industries; and develop baseline information). • Establish process for sharing market information on ongoing basis (Develop action plan to obtain information from international offices, trade officials, and industry). • Identify opportunities and incorporate arts and cultural industries in international marketing initiatives to maximize publicity and awareness (Stakeholder action plan). **Training** • Work with industries to identify needs and develop training and education programs to assist Alberta artists and companies (Export readiness, proactive marketing, technical, and business skills). **Financing** • Work with governments, agencies, and the financial community to encourage changes in investment climate (Identify specific problems related to financing intellectual property; develop action plan). • Work with industry to develop alternative and cost-effective funding mechanisms, such as strategic alliances. **Treatment of Intellectual Property** • Work with industries to ensure appropriate intellectual property, neighbouring rights and copyright legislation is in place at all levels to protect the rights of Alberta-based artists and companies (Prepare and distribute information on regulatory environment in priority markets and work with stakeholders to address gaps).

BIOTECHNOLOGY/MEDICAL AND HEALTH CARE PRODUCTS AND SERVICES

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Two subsectors: biotechnology/ pharmaceuticals, and medical products and health care services. • Biotechnology and pharmaceuticals focused on R & D. Research has resulted in spin-off companies. • Medical products includes about 40 manufacturing firms, mainly small owner-operated and serving niche markets. • Alberta firms have been providing services to the Middle East and Russia.	• Excellent infrastructure support, enabling world-class research capabilities and strategic partnerships between universities, research centres and private industry. • Favourable regulatory environment, highly skilled health scientists, researchers and technical personnel, and a well-developed research, science and technology infrastructure.	• R & D is critical for these industries.	• Japan is a growing market for medical products and devices, particularly in products for the elderly. • Kuwait, the United Arab Emirates and Saudi Arabia have been markets for health care services for a number of years.	• U.S. - outpatient care, nursing home care, medical waste management, drug delivery devices, DNA probes, minimally-invasive surgical devices, etc. • Washington State - strategic alliances in joint R & D, cross marketing, joint clinical testing, manufacturing and distribution in biotechnology. • Minnesota - potential joint ventures or strategic alliances with medical manufacturing industry. • Mexico, Latin America, Eastern Europe - possible markets for expertise in health care management and delivery. • Russia - equipment and pharmaceuticals to build infrastructure. • Mexico - potential for turn-key operations. • Middle East - health care professionals, health care management, management consulting, and service providers, i.e. human resource management and primary health care.	Priorities are: • develop strategic alliances and flexible networks • strengthen Alberta's domestic market position • increase marketing expertise and intelligence • develop medical products and health services export strategies • build the industry's image • target geographic opportunities.

BUSINESS AND PROFESSIONAL SERVICES

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• 154,600 jobs in Alberta; 10.9% of Alberta's total workforce in 1994. • Relates to services that are essential to the operation of all businesses. • Includes: accounting, management consulting, financial services, business training, library services, advertising media, communications, legal services, information services, and personnel services.	• A number of well-established professional organizations. • The sector has traditionally functioned without any government assistance.	• Not well organized as a sector and has not identified any strategic direction or priorities.	• The completion of the 1994 Alberta Services Export Survey will be the Alberta Government's first effort to track trade in services.	• In 1991, global exports of commercial services reached \$890 billion and accounted for nearly 1/4 of all world trade. • In 1992, this sector added \$7.5 billion or 11.2% to Alberta's GDP. The largest contributors were finance and real estate valued at \$3.4 billion, and business services valued at \$2.2 billion.	Two areas are essential to the development of strategic direction: • establish baseline data on the sector participants and their business activities • establish lines of communication between groups in the sector and government.

CHEMICALS, PETROCHEMICALS AND REFINED PETROLEUM PRODUCTS

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS /ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
Petrochemicals & Chemical Fertilizers • Ethane-based ethylene & ethylene derivatives, methanol & methanol derivatives. • Ammonia & ammonia fertilizers. **Industrial Inorganic Chemicals** • Carbon black, chlorine, sodium chlorate, caustic soda, hydrogen peroxide, hydrogen sulphide, hydrochloric acid, carbon dioxide & sulphuric acid. • Generally used in industrial processes such as pulp & paper, mining, petroleum refining & fertilizers. **Organic & Specialty Chemicals** • Paints & varnishes, soaps and cleaning compounds, rust inhibitors, catalysts and other specialty chemicals used in the oil & gas industry. **Refined Petroleum Products** • Transportation fuels, heating oil, asphalt, petrochemical feedstock, kerosene, lubricants, and other miscellaneous products. **Chemical and Chemical Products** • Petrochemicals & chemical fertilizers, industrial inorganic chemicals, and specialty chemicals.	• Alberta's chemical and chemical products industry is the province's third largest manufacturing industry. In 1993, it directly employed 9,200 people, was Alberta's largest export sector in the manufacturing industry, and accounted for $1.6 billion in exports or 27.7% of all manufacturing exports. • The Alberta petrochemical industry is highly export-oriented. More than half of the value of production ($1.2 billion in 1993) was sold to markets outside Canada. • The industry is based on competitively priced feed stocks, competitive taxes, and sufficient ethane supplies.	• Petrochemicals and refined petroleum products are capital-intensive industries, dominated by large national/ multinational corporations with decision makers outside Allberta. • Refined petroleum products are primarily focused to supply Western Canada. In 1993, only 7% of its sales were outside Canada, mainly the result of the lower value-added nature of refined petroleum products compared to petrochemicals.	• The Alberta petrochemical industry is highly export-oriented. • Major petrochemical markets include: the U.S., Western Europe, Asia and Latin America. More than half of the value of production ($1.2 billion in 1993) was sold to markets outside Canada, 66% were destined to the U.S., and 32% were sold to Asia. • Refined petroleum products are focused on the Western Canadian market; most trade between Canada and the U.S. occurs between adjacent border states and provinces.	• Investment opportunities have been identified and will be promoted. • These include: oxygenated fuel additives, higher olefins, additional ethylene production, ethylene derivatives, propylene, and derivatives for local plastic producing and export.	Encourage expansion of the chemical industry through the following: • a competitive tax environment, including the amendment or replacement of the Machinery and Equipment tax • maintain sufficient quantities of competitively priced feedstock • explain the Alberta Advantage to key individuals in the global petrochemical industry, including feedstock pricing, ethane supply and transportation costs • participate in key trade shows, conferences and international petrochemical events. Offer Alberta programs and information seminars with presentations on the Alberta Advantage, keynote speakers from the Alberta industry and government • visit international petrochemical companies that express an interest in Alberta, to encourage them to seriously consider investing in Alberta in 1995/96. Decision makers in multinational chemical companies reside outside Alberta. A strategy is needed on how best to work with these companies to meet Alberta's objectives. Alberta Ministers and officials should meet with CEOs of national and multinational chemical companies to encourage them to invest in Alberta . A communications strategy will be developed to support this.

CONSUMER PRODUCTS

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
One of the largest components of world trade in goods. Subsectors include: • furniture - 350 firms (mostly small); $229.5 million shipments in 1993; international exports $63 million in 1993. • clothing, textiles and sewn products - 175 clothing manufacturers; 1993 shipments grew by 16.1% to reach $161 million. • hardware and home improvement products - 800 companies; international exports $12.5 million in 1993. • giftware and crafts - 8,000 producers; approximately $80 million in gross sales. • sporting and recreational goods - 50 companies; Alberta shipments about $20 million in 1993.	• Alberta strengths include the production of a good quality product, the ability to customize the product to meet consumer demand, innovative design skills, and a skilled labour force.	• Developing countries are increasing their share of world trade in both labour-intensive industries and capital-intensive, standard technology, mass production industries. • Alberta's competitive disadvantages include the current level of management and marketing capabilities of most companies to compete internationally, increased global competition, and high labour costs. • Industry is fragmented and diverse, making it difficult to measure size and activity.	• Canada's export focus will be on developed countries, particularly the U.S. over the next five to 10 years. • Furniture: Germany, U.S., France, the Netherlands and U.K.. Taiwan is the largest competitor. • Clothing, textiles and sewn products: traditionally served small domestic markets; independent and specialty clothing stores offer good sales opportunities. • Hardware and home improvement products: niche markets in Japan, Mexico and Europe. • Giftware and crafts: U.S., Japan. • Sporting and recreational goods: Alberta, other Canada, U.S.; world market in sporting and recreational goods estimated at $70 million (Canada has 3%); 44 Alberta companies in niche markets.	• Trade in regional blocs is expected to increase faster than that between blocs or between developed and developing nations. • Developing countries are expected to gradually increase their share of consumption in consumer goods. • In developed countries, the fastest growth in demand will be in high-quality, fashionable and functionally designed products. • Aging population in developed countries, convenience of goods, and environmental trends will all affect demand.	• Continually review global market and subsectors to identify and disseminate market opportunities. • Help firms develop business skills, marketing, export readiness. • Facilitate networking between producers and both suppliers and wholesalers. • Help firms identify market opportunities, both domestic and international. • Develop inventory of Alberta companies and producers.

EDUCATION AND TRAINING

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Consists of organizations engaged in the delivery of education and training services and products on a fee or contract basis. • Includes design, production and delivery of education and training programs and materials. • Export training and global awareness enhance Alberta's exports.	• Highly qualified people and excellent facilities. • Modern, adaptive education and training sector, responsive to both social and economic progress. • Quality, reliability and acceptance of Canadian credentials internationally. • Alberta's reputation as a safe, clean, friendly, natural environment. • Programs promoting better understanding of international business. • Growing cooperation within some sectors of the industry.	• International competition for education and training contracts is strong. • U.K., U.S., France, Japan, and Australia have all adopted aggressive, co-ordinated approaches that have resulted in their capturing significant parts of the international market.	• U.S. - most accessible export market and can serve as springboard for others. • Niche markets - exist in Germany, Italy and France.	• Growing markets in many countries for direct education and training purchases, • The markets with the greatest potential are Japan, Pakistan, Korea, Indonesia, India, China, Taiwan, Malaysia, Mexico, Canada, U.S., Kuwait, United Arab Emirates, Saudi Arabia, and Lebanon. • Human resource and institutional development.	• Develop intelligence on export experience, expertise and existing and potential capacity of the sector. • Develop intelligence on priority market opportunities. • Develop marketing plan in co-operation with public and private organizations. • Assist sector in acquiring skills and knowledge needed to identify and take advantage of national and international opportunities. • Assist sector, public and private, to work more co-operatively. • Raise national and international profile as an experienced, reputable and innovative provider of a wide range of education and training goods and services. • Provide Albertans with the education and training they need to compete successfully in an increasingly global economy.

ENERGY AND OIL AND GAS EQUIPMENT AND SERVICES

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS /ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Development of energy resources and related products represents over 20% of Alberta's economy, and royalties and bonuses account for approximately 20% of revenues. • The Alberta industry has developed an extensive and unique capability for finding, producing, processing, transporting, and using conventional oil and gas, oil sands and coal. This in turn has created an extensive equipment manufacturing, supply and service sector, which is increasingly active and internationally competitive. • Challenging geological and climatic conditions have resulted in development of unique and specialized equipment and skills. Growing equipment and services sub-sectors in the fields of exploration, production, transportation, engineering, construction and project management services are competitive worldwide. • The upstream production sector comprises oil and natural gas, oil sands, coal, sulphur, electrical equipment technologies and services, and mineral and metals.	• Unique and specialized equipment and skills are competitive world-wide. Products and services include exploration, drilling, servicing, production and processing, pipeline transmission and distribution of oil and gas, and management of mineral resources such as coal and sulphur. • Alberta is a major oil and gas producer, with a total production value of $16.3 billion. Natural gas exports to the U.S. are the strongest growing market segment. • Alberta's oil sands contain approximately 300 billion barrels of potential, recoverable crude petroleum. Alberta expertise in oil sands technology is in demand worldwide. • Alberta's coals have low sulphur content and high reactivity, providing considerable environmental advantages.	**Oil and Natural Gas** • Cost-efficient pipeline access to North American markets make exports to offshore markets unattractive. **Coal** • Challenge is to maintain cost competitiveness in export markets. **Sulphur** • Challenge is to retain market share in existing markets while developing both new markets, for products such as plant nutrient sulphur (PNS), and new uses, such as in concrete. **Oil and Gas Equipment and Services** • Challenge is to penetrate world markets with products and services and to promote the adoption of Alberta codes and regulations.	**Oil and Natural Gas** • United States **Coal** • Steel production in Asia, Japan, S.Korea, Brazil. • Power generation facilities worldwide. **Sulphur** • Fertilizer production and chemical industry worldwide. **Oil and Gas Equipment and Services** • Markets for oil and gas products and services include mature oil producing countries, new producer countries and emerging oil and gas producing countries. Efforts to identify alliances/partners for strategic and financial reasons include countries/cities deemed as gateway markets. Major consumer countries are also markets to identify financial and strategic partners for international oil and gas development.	Exports include: • exploration equipment and services, • production equipment and services, • transportation equipment and services, • engineering and construction and project management, • training and safety services, • energy and environmental management • regulatory advice. • Alberta know how and technology have been adapted to specialized conditions for remote locations, cold weather, sour gas, and heavy oil and oil sands.	**Oil and Natural Gas** • Encourage sustainable development by the private sector while ensuring protection of the environment. **Oil Sands** • Encourage further development and investment. **Coal** • Work with industry to identify actions. **Sulphur** • The private sector to seek opportunities. **Electric Power Generation** • Develop regulatory framework and industry structure that promotes a highly efficient electricity sector. **Minerals and Metals** • Increase the quality and quantity of baseline geological information necessary to attract the attention of the mineral exploration industry. **Oil and Gas Equipment and Services** Increase the international competitiveness of the sector as follows: • Liaise with industry associations to disseminate information about project opportunities and strategic issues. • Encourage company linkages and consortia formation. • Facilitate manufacturing and service growth through business establishment, plant expansion, and investment prospecting. • Assist with export development in priority markets through incoming and outgoing trade missions, domestic and international trade fairs and promotion of strategic alliances.

ENVIRONMENTAL INDUSTRIES AND SERVICES

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Approximately 800 companies employ about 8,000 workers and generate $600 M to $700 M annually in revenue. • Focus is on services for 70% of firms. • Sector consists of four basic groups: small entrepreneurs, consulting services, equipment suppliers, and manufacturers of environmental products.	• Competitive strengths in environmental processes, products and services. • Of the four western provinces, Alberta has the best established environmental industry association. • World-competitive products and processes: water/wastewater treatment, environmental effects monitoring, recycling, site remediation, hazardous waste collection and treatment, and laboratory services. • Expertise in environmental policies and regulatory processes. • Well developed infrastructure including Swan Hills, Vegreville - Environmental Centre, and the Alberta Research Council.	• Less than half the domestic market is being supplied by Canadian companies. The bulk is being supplied through imports (90% of which are from the U.S.). • At present, less than half of Alberta companies are exporting.	• 60% of total environmental sales by Alberta companies were within the province. • Export markets include: western provinces (13.8%), U.S. (12.6%), eastern provinces (5.5%), western Europe (3.3%), Pacific Rim (3.3%), and eastern Europe (0.2%).	• Sector is changing its orientation from environmental clean-up to the development of new processes and technologies to reduce environmental problems. • Significant opportunities for growth in international markets, particularly the U.S., Latin America, Europe and Asia. • NAFTA presents excellent opportunities for products and services. • Alberta's expertise in regulatory processes and environment policy.	• Attract investment. • Strengthen and expand R&D. • Improve market intelligence. • Export training. • Identify opportunities. • Raise international awareness. • Improve access to specific markets.

FOREST AND BUILDING PRODUCTS

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Fourth largest primary economic sector in Alberta, behind energy, agriculture and tourism. 1993 shipments were estimated at $3 billion. • Direct employment in Alberta's primary and secondary forest industries is estimated at 19,500, with direct and indirect employment estimated at 48,750. • Total sector shipments in 1996 are anticipated to exceed $4 billion. For the primary and secondary wood products industries alone, shipments should be up from $2.5 billion to about $3.5 billion, a result of expansion and industry price increases. International exports in 1993 were $1.7 billion. • Almost $4 billion in new investment has occurred in the sector since 1986, with a major increase in the production of pulp, newsprint, oriented strandboard (OSB) and medium density fibreboard (MDF). • The major industry groups are: pulp and paper; wood and panelboard; value-added wood and non-wood building products; related machinery, equipment, supplies and services.	• Manufacturers of pulp and paper, lumber and panelboard are highly efficient due to recent investments, modern technology and a favourable business climate and infrastructure. • Alberta's resources produce quality products; pulp with high brightness and strength make it ideally suited to producing a wide range of paper products and lumber preferred by home builders and millwork firms in North America and overseas. • Over the next few years, growth should continue as pulp and paper producers expand capacity and consider moving into value-added products such as fine paper. • There is a solid base of producers of "value-added" lumber and engineered wood products in the province. Two new OSB mills will come on line, the MDF mill will complete an expansion and Alberta's first laminated veneer lumber mill will start up in 1995-96. • Industry expansion, favourable exchange rates and increasing prices are causing industry growth.	Challenges faced by the industry include: • maintaining competitiveness • responding to growing environmental awareness • addressing restrictive trade practices. Need to assist small and medium-sized Alberta producers of value-added wood and non-wood building products as they prepare to compete in export markets. This involves the provision of market intelligence, counselling and, for some firms, participation in targeted trade shows and incoming and outgoing market and technical awareness missions.	**Value-Added Wood and Non-Wood Building Products** • Asia Pacific, Japan • Canada, U.S. • Alberta **Wood and Panelboard** • Canada, U.S. • Europe • Asia Pacific, Japan • Alberta **Pulp and Paper** • Asia Pacific, Japan • Canada, U.S. • Western Europe **Related Supplies and Services** • Alberta, B.C., • Saskatchewan • U.S. Pacific Northwest • Mexico • South America • Eastern Europe	**Products** • Softwood & hardwood BKP (pulp), softwood & hardwood BCTMP (pulp), newsprint, paperboard and building paper, softwood lumber, structural panels, particle board, MDF, value-added lumber products, secondary wood products, landscaping products, mechanical and electrical products, pre-fabricated homes, non-wood building products, suppliers of plant machinery & equipment, and transportation and distribution. **Services** • Consulting, environmental engineering, technical and scientific support services, and forest management and technology services.	• Foster environmental leadership. • Enhance export readiness. • Secure and expand market access. • Provide a competitive economic and regulatory structure. • Focus on priority export markets. • Support strategic alliances. • Develop a strategy for value-added wood products in co-operation with industry. • Explore markets for pre-packaged housing units as a vehicle to selling Alberta products and expertise. • Work with industry to identify supply and manufacturing opportunities. • Organize technology missions and demonstration workshops to facilitate technology transfer.

INFORMATION TECHNOLOGY

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPOR-TUNITIES	STRATEGIC DIRECTIONS
Electronics/Tele-communications • 220 Alberta companies in electronic design and manufacturing. • Value of shipments $1.95 B in 1994. • Employs about 7,460 people. • Approximately 67% of product is exported outside of Canada. **Software/Computing Services** • Over 1,300 companies in software/computing services. Over 400 companies export outside the province. • Strengths in technical applications. • Electronics includes six subsectors: electronic parts & components; instrumentation & control; electronic design & subassembly; computer & peripheral equipment; telecommunication equipment; and telecommunications services.	**Telecommunications** • Growth attributed to establishment of advanced technology institutes. • The Hewlett-Packard, IDACOM division is a world leader in producing and marketing protocol test equipment. • Leader in telecom manufacturing. • JRC Canada Inc., Lethbridge, is Canada's only designer and manufacturer of cellular telephones. **Telecommunications Services** • Telecom carriers ensure access to new technological advances. In 1993, carriers had combined annual revenues of $1.57 billion and employed almost 10,000 people. • Alberta has a key role in building Canada's advanced information and communications infrastructure. **Software/Computing Services** • Rapid growth in global opportunities, including Canada's "information highway". • Technical applications expertise in niche areas: oil & gas/seismic, geomatics, communications /networking, and educational & training software. • Produces good quality technically robust products. • Proximity to U.S., the world's largest software/computing services market. • Well qualified graduates from Alberta's universities and technical schools.	**Electronics and Telecommunications** • Demand for reduced time to market and rapid expansion to meet global competition. • Extensive R&D needed for new products to develop and influence international standards. • Major changes in entertainment services. • Increased social and government pressures. • Shift from mainframe-based systems to desktop applications. • Restructuring of telecom industry into broadband (multi-media) and wireless communications. **Software /Computing Services** • Local firms suggest small size leaves them poorly equipped and/or financed to address business planning and international marketing. • Industry assets often intangible and make financing difficult. Also concerns over protecting intellectual property and copyright. • Small domestic market means must exploit global markets. • Market volatile and highly competitive, requiring continuous innovation and adaptation. • Uneven cash flow, with significant non-recurring revenues, makes financial planning difficult.	**Electronics and Telecom-munications** • U.S. (39% of Alberta's goods and services), Europe (12% of products shipped), Asia Pacific (6% of exports in 1993), and Latin America, and the Middle East (2% of export market). **Software and Computing Services** • Canada, U.S., Mexico/Latin America, Japan, Korea, Southeast Asia, China, Taiwan, Hong Kong, Europe, and Russia/ Eastern Europe.	**Electronics and Telecom-munications** • Telecom-munications equipment, oil field instrumentation, control systems, computer and peripheral equipment, contract assembly, geomatics and power systems. **Software and Computing Services** • Oil and gas, seismic, geomatics, manufacturing, communications /network, systems enhancement, office automation, marketing, accounting, educational and SCADA.	**Electronics and Telecommunications** • Identify equipment and component manufacturing opportunities and encourage supplier development initiatives with the Information Technology Association of Canada. • Facilitate joint ventures and strategic alliances between foreign and Alberta companies through federal initiatives, missions, trade shows and networking. • Continue to support and promote Alberta's technology infrastructure as an effective means of providing technology transfer and prototype development for industry. • Work with telecommunication and cable carriers to identify new business opportunities resulting from the convergence of sectors. • Identify, encourage, create and support clusters of excellence. **Software/Computing Services** • Conduct comprehensive characterization of the subsectors. • Determine growth potential and barriers to entry in non-North American markets. • Enhance access to financial markets. • Enhance access to the Internet and encourage development of this infrastructure. • Promote "Alberta Advantage" and local company capabilities. • Assist companies to become export ready through education and marketing assistance.

INVESTMENT

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
Several trends are influencing economic development agencies' approach to facilitating investment. • Demand for investment capital has become more competitive so that more countries are actively seeking investment, opportunities to invest are growing in "new economy" industries or in applying "new economy" technologies to traditional industries, and capital is becoming more and more mobile. • The focus and roles of government continue to evolve. • New concerns such as regulatory burdens and the environment are becoming important in defining investment risk. • The emergence of distinct trading blocs may have a pronounced influence on future capital flows.	• One of the fastest growing economies in Canada. • Alberta has differentiated itself by choosing to move away from direct financial incentives to business, and to focus on the province's economic fundamentals and the overall climate for business.	• Competition in attracting investment is heightened by incentives offered by economic development agencies. • Competitive North American market for investment. • Competition to secure investment is increasing globally.	• Varies with industry sector.	• Varies with industry sector.	• Visible and personal relationships with decision makers in national and international finance, the business community and other governments, led by the Premier, ministers and senior government officials. • Partnership and cooperation with Alberta's industry, business communities and other levels of government. • A strategic communications plan and materials, marketing the Alberta Advantage and investment potential. • Accurate and timely market intelligence; in-depth knowledge and understanding of Alberta's advantages; focused actions and responses to clients. • An in-depth knowledge and understanding of local and out-of-province investors' needs and sensitivities; service orientation. • An in-depth knowledge and understanding of Alberta's competitors.

PLASTICS AND ADVANCED MATERIALS AND PROCESSES

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Over 300 companies in this sector. • Plastics products range from commodity industrial and consumer products, to higher technology products for the electronics, computer, telecommunications and aerospace industries. • Advanced material companies produce a range of specialty polymers, metals, ceramics and composites. • Total annual sales in plastics is estimated at $600 million. • The sector employs some 15,000 persons.	• Growing 4 to 5 times faster than the rest of the economy. • Modern, efficient, competitive and highly motivated. • Alberta is becoming the centre of Canadian industrial polymer manufacturing and the centre of industrial research for these materials.	• Advanced material companies need to maintain R & D to be competitive, therefore risk management becomes critical. • Alberta manufacturers of Advanced Manufacturing Technologies (AMT) products are in the early stages of development and are smaller than their competitors in other provinces and countries.	• Advanced materials and process technologies are strategically important to Alberta's traditional industries such as oil and gas, forestry, petrochemicals, as well as emerging industries like telecommunications, electronics and health care. • Plastics markets tend to be regional rather than global due to transport costs. • In 1994, demand for plastics grew throughout North America. • Priority markets are Western Canada and the Pacific Northwest United States. • International markets include the United States, Western Europe, Japan, Latin America, Mexico, Taiwan, Korea, Malaysia, Hong Kong, and Thailand.	• Emerging industries offer high value-added potential but low volume output in the near term. • Opportunities exist for expanded manufacturing of plastics in Alberta for products currently being imported to the western region. • The next generation of manufacturing, AMT, will bring design, production and inventory control together into integrated systems. • Manufacturing processes will be simplified. New advanced automated equipment will be developed. • The use of new materials is expected to accelerate, requiring advanced processing machinery. • Australia, Canada, Europe, Japan and the United States are cooperating in the Intelligent Manufacturing Systems Program. Now in the feasibility stage, IMS aims to develop new technologies and establish international standards for the next generation of industrial technologies, while sharing the costs and risks.	**Advanced materials** • Strengthen international competitiveness of polymer industry. Support a domestic and export growth strategy for sector companies. • Maximize economic benefit of Westaim - developed advanced materials and process technologies. • Address needs of the industry where possible. • Align public technology infrastructure with industry needs. • Create and encourage flexible business networks; encourage strategic alliances. • Identify companies and sectors that could be more efficient by use of enabling technologies. • Encourage use of R & D resources. • Explore potential for increased market penetration. • Encourage firms to use export orientation programs offered by ED&T.

TOURISM

SECTOR INFORMATION	SECTOR STRENGTHS	CONSTRAINTS/ ISSUES	CURRENT MARKETS	OPPORTUNITIES	STRATEGIC DIRECTIONS
• Alberta's third largest industry. • Generated $3.12 billion in revenue in 1993 ($1.45 billion from non-residents; $1.67 billion from Albertans). • Employs about 92,300 Albertans. • Generated $1.1 billion in tax revenues ($710 million federal, $282 million provincial, $114 million municipal). • Diverse range of world-class natural and heritage attractions, facilities and services.	• Internationally recognized destination; high quality product. • Diverse natural beauty and scenery; national parks, protected areas, wildlife, uncrowded. • Opportunities to escape or get back to nature yet close to urban comforts. • Urban centres are modern, accessible, safe and clean. • Array of hard or soft adventure activities. • World-class historic sites, museums and resources. • Festivals offer unique experiences. • Competitive value for dollar with no sales tax, plus friendly hospitality. • New product e.g. Bow Corridor, smaller scale accommodation, and urban parks/recreation experiences packaged with business and convention products.	• Limited awareness and misperceptions of province. • Increasing competition from more aggressive destinations. • Accessibility/lack of direct flights from some markets. • Need to increase year round tourism. • Service levels good, but need to respond to demands of international visitors (currency exchange, known service chains). • Need new facilities or products based on market demand. • Competition for investment dollars. • Sustainable tourism; challenge to balance growth and conservation. • Increased demand for cooperative marketing; return on investment.	**Existing Primary** • Canada - Western Canada, Ontario • U.S. - California, Washington, Texas, Florida, New York • Japan • Germany • United Kingdom **Existing Secondary** • Other Canada, Other U.S., Australia/New Zealand, France, Switzerland, and Netherlands. **Emerging** • Hong Kong, Taiwan, Italy, Austria, South Korea, Argentina, Brazil, and Mexico.	• Improved global economy is providing markets with increased wealth and desire to travel. • Opportunities for cooperative marketing initiatives with other jurisdictions in areas of mutual interest. • Current exchange rate for $U.S., plus no provincial sales tax, is incentive for travel to Alberta from both domestic and foreign markets. • Trend to getaways means opportunities to capitalize on time-sensitive, value-added incentives targeting 'visiting friends and relatives' and getaways. • Diversity and quality of landscapes and product position Alberta to respond to growing demand for wide range of tourism products and experiences. New developments, such as in Bow Corridor and small scale accommodation throughout the province, offer new products to respond to market demands.	In cooperation with the tourism industry, strengthen existing, and develop new, partnerships to pursue strategic directions. • Identify research requirements, undertake research into products and markets, and disseminate results to industry partners. • Encourage development, growth, and investment in the tourism industry. • Increase private sector and community awareness of the benefits of, and encourage investment in, community-based tourism. • Emphasize priority markets and initiatives that offer the greatest return on investment. • Present a consistent and co-ordinated image to out-of-province markets.

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